



1-10-16-10M

~~S. 2. A.~~

—PRESENTED TO—



The New York Academy of Medicine

By The Publisher.











# ILLINOIS MEDICAL JOURNAL

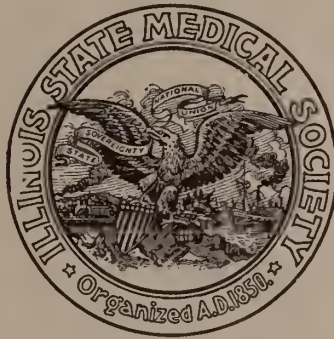
THE OFFICIAL ORGAN OF

The Illinois State Medical Society

PUBLISHED AT CHICAGO, ILL.

CLYDE D. PENCE, M. D., Editor

HENRY G. OHLS, M. D., Managing Editor



INDEX TO VOLUME XXXII

---

JULY TO DECEMBER, 1917

THE N. Y. ACADEMY  
OF MEDICINE

MAR 5 1918

109189

LIBRARY

P81P01

# INDEX TO VOLUME XXXII

July to December, 1917

This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including

the names of papers read, officers elected, etc., can be located in the proceedings under Societies. Editorials, News of the State, Marriages, Deaths, Public Health Items are classified under these headings. The subjects of editorials also appear alphabetically and are marked (E).

## A

Acidosis in Children, Treatment of.  
H. C. Blankmeyer, Springfield...119  
Aliens and the Draft. (E).....133  
Allport, Frank. Paper.....182  
Aliport, Frank. Paper.....395  
American Red Cross (E).....421  
Aniridia. Emory Hill.....211  
Angioma, Treatment of Cavernous  
and Plexiform. Francis Reder,  
St. Louis, Mo.....387  
Another Imposition. (E).....206  
Arbuckle, M. F. Paper.....153  
Arthritis, Etiology of Acute. War-  
ren R. Rainey, E. St. Louis.....129  
Army Roentgenologists. (E).....207  
Arp, Resolutions on Death of Doc-  
tor. (E) .....289  
Asthma (Abstract). R. H. Brown,  
Chicago ..... 63  
Asthma. Richard H. Brown, Chi-  
cago .....345  
Aviators, Visual Requirements of  
Military. Chas. P. Small .....214

## B

Baby's Milk and War Prices (E)...424  
Baird, Ben D. Paper.....109  
Barnes, L. Edwin. Paper.....326  
Barnes, Walter S. Discussion.... 66  
Bartow, Edw. Paper.....248  
Baxter, Geo. Edwin. Abstract..... 64  
Baxter, Geo. Edwin. Discussion.... 68  
Baxter, George Edwin. Paper....381  
Beck, Jos. Abstract .....141, 213  
Beck, Jos. C. Discussion.....  
.....141, 145, 367, 299  
Beck, Jos. C. Paper.....194  
Billings, Banquet to Doctor. (E)...358  
Blaine, Edw. S. Paper.....100  
Blankmeyer, H. C. Paper.....119  
Blech, G. M. Abstract..... 64  
Blindness, Lay Organization in Pre-  
vention of Carolyn C. Van Blar-  
com, Chicago ..... 63  
Blindness, Responsibility of Medical  
Profession in Prevention of. E.  
V. L. Brown, Chicago..... 63  
Blindness, Value of Laboratory in  
Prevention of. Francis Lane,  
Chicago ..... 63  
Blindness, What the State Can Do  
to Prevent. Willis O. Nance,  
Chicago .....155  
Blood Pressure Again. J. Sberlaw,  
Chicago .....281

### Book Notices:

Anatomy for Nurses. W. C.  
Christian .....308  
Anatomy, Manual of. Henry E.  
Radlasc .....440  
Asthma. Orville Harry Brown.. 75  
Baby's Food. Isaac A. Abt.....227  
Cataract, Senile, Traumatic and  
Congenital. W. A. Fisher..... 76  
Chicago Medical Directory.....440

Diseases of Women. Harry Stur-  
geon Crossen .....440  
Conversion of Hamilton Wheeler.  
Prescott Locke .....303  
Diseases of the Eye. Cbas. H.  
May .....303  
Diseases of the Genito Urinary  
Organs and the Kidneys. Robt.  
H. Greene .....150  
Diseases of the Nervous System.  
S. E. Gelfie and W. A. White.303  
Diseases of the Skin. Richard L.  
Sutton .....304  
Emergencies, Treatment of. H.  
R. Owens .....151  
Eye, Ear, Nose and Throat. H.  
C. Ballenger ..... 75  
First Aid and Emergency Treat-  
ment, Text Book. A. C. Burn-  
ham .....151  
First Lessons in Spoken French  
for Doctors and Nurses. E. H.  
Wilkins, et al.....228  
Food Poisoning. Edw. Oakes  
Jordan ..... 75  
Gynecology. E. C. Dudley.....304  
Gynecology, Hand Book of. H.  
F. Lewis .....152  
Impotency, Sterility and Artificial  
Impregnation. Frank P. Davis.152  
Impotence and Sterility. G. Frank  
Lydston .....440  
Laboratory Diagnosis, Manual.  
Gardner and Lincoln.....440  
Materia-Medica and Prescription-  
Writing. O. W. Bethea.....227  
Mayo Clinics; 1916. Papers.....151  
Medical and Surgical Reports of  
the Episcopal Hospital in Phila-  
delphia, Vol. 4.....152  
Medical Clinics of Chicago, Vol.  
2, No. 6..... 76  
Medical Clinics of No. America.  
Vol. 1, No. 1.....227  
Medical Clinics of No. America.  
Vol. 1, No. 2.....380  
Medicine, History of. Fielding  
H. Garrison .....440  
Muskets and Medicine; or, Army  
Life in the 60's. C. B. John-  
son ..... 76  
Nutrition and Clinical Dietetics.  
Herbert S. Carter.....228  
Obstetrics for Nurses. Chas. B.  
Reed .....304  
Operative Surgery for Nose,  
Throat and Ear. Hanau W.  
Loeb, et al..... 75  
Orthopedic Surgery. John Rid-  
lon .....304  
Pediatrics. Isaac A. Abt.....304  
Pharmacology. Experimental. Den-  
nis E. Jackson ..... 75  
Physicians' Visiting List. Blakis-  
ton's Son & Co.....440  
Physical Exercises for Invalids  
and Convalescents. Edw. H.  
Ochsner .....152  
Poliomyelitis in all Its Aspects.  
John Kuhrah .....228  
Practical Medicine Series. Chas.  
L. Mix .....304

Practical Medicine Series. Vol.  
2. General Surgery. A. J.  
Ochsner ..... 76  
Practical Medicine Series. Vol.  
3. Ear, Eye, Nose and Throat.  
Casey A. Wood, et al.....152  
Practical Treatment. Vol. 4. J.  
H. Husse, et al.....228  
Prescription. Otto A. Wabl.....303  
Preventive Medicine in Hygiene.  
M. J. Rosenau.....304  
Roentgen Diagnosis of Diseases  
of Alimentary Canal. R. D.  
Carman .....227  
Roentgen Technic. Norman C.  
Priuce .....152  
Sanitation for Medical Officers.  
Edw. B. Vedder.....303  
Science of Nutrition, Elements  
of. Graham Lusk .....151  
Surgical Clinics of Chicago. Vol.  
1, No. 3. ....150  
Surgical Clinics of Chicago. Vol.  
1, No. 4.....380  
Therapeutics, Materia-Medica and  
Pharmacy. S. O. L. Potter.....228  
Urology. Edw. L. Keyes.....151  
Boot, Geo. W. Abstract...66, 67, 219  
Braasch, W. F. Paper.....229  
Brown, Everett J. Paper..... 12  
Brown, E. V. L. Abstract..... 63  
Brown, E. V. L. Discussion.....215  
Brown, R. H. Abstract..... 63  
Brown, Richard H. Paper.....345  
Buchbinder, J. H. Abstract..... 64  
Burdick, Gordon G. Discussion... 17  
Burkhardt, C. F. Discussion...66, 216  
Burkhardt, C. F. Paper.....188  
Byford, Henry T. Paper..... 10  
By-Laws, Changes in. (E)..... 30

## C

Carr, A. M. Abstract .....215  
Carr, A. M. Case Record .....372  
Cataract, Treatment of Membran-  
ous. H. W. Woodruff, Joliet...164  
Cavanaugh, John A. Paper.....161  
Cesarean Section. H. M. Orr, La  
Salle .....116  
Chance, Burton. Abstract .....221  
Chance, Burton. Discussion .....297  
Cheney, Henry W. Paper..... 94  
Child, Howard T. Paper.....287  
Choreic Child, Duty of State to.  
C. B. King, Chicago.....253  
Church, Archibald. Discussion....297  
Clinical Congress. (E).....359  
Collins, Clifford U. Paper.....111  
Condit, W. H. Paper.....406  
Conjunctivitis, Chronic. Harry S.  
Gradle .....372  
Conservation of Surgical Dressings.  
(E) .....355  
Correspondence:  
Birth Reporting .....364  
Chicago League for the Hard of  
Hearing .....361



Exemption Board Recognized Anti-T. B. Work.....	364
Health Insurance. F. R. Green.....	32
Insurance, Health .....	32
Insurance, Indemnity .....	33
Medical Review of Reviews.....	363
Medical Situation. Bayard Holmes .....	137
Milk Ordinance, Guide for.....	364
Moratorium on Leases.....	363
Ophthalmologist and Optometry.....	138
Optometry Act Void. R. J. Folonie .....	34
Physicians and Surgeons' Liability Insurance Policies .....	362
Physicians' Leases .....	208
Re-education and Reconstruction of Cripples .....	291
State Medical Meeting .....	33
Steele (Dr.) Retires .....	136
Surgical Instruments. V. Mueller 33	
U. S. Civil Service Examination.....	365
What the Government Asks of the Press .....	208
Corwin, A. M. Abstract .....	64, 220
Corwin, A. M. Discussion .....	143
County Medical Society, Duties of Secretary .....	259
Cystocele, Operation. W. L. Gray, Champaign .....	108

## D

Darling, Chas. C. Abstract.....	216
Darling, C. G. Paper.....	177
Darmar, Geo. A. Discussion.....	217
Davis, David J. Paper.....	84
Davis, Effa V. Paper.....	250
Davis, Thos. A. Paper.....	1
Deafness, Treatment of Catarrhal. M. F. Arbuckle, E. St. Louis.....	153
Deal, Don W. Paper.....	261

## Deaths:

Abbott, George B.; Chicago.....	74
Abt, Joseph H.; Chicago.....	150
Arp, August H.; Moline.....	302
Baker, Frederic R.; Chicago.....	227
Barker, Brent L.; Monticello.....	380
Bartholow, James M.; Urbana.....	439
Bell, William Herman; Bellevue, Ohio .....	150
Bernhardi, Carl Oscar; Rock Island .....	380
Blackwelder, James F.; Litchfield.....	380
Bradford, James A.; Macedonia.....	226
Brock, John E.; Arkansas City Ark. ....	227
Buhrmaster, Edward William; La Harpe .....	380
Bushnell, George Elmer; Rochelle .....	227
Cheany, William J.; Petersburg.....	150
Christie, Robert J.; Quincy.....	301
Cox, Logan O.; Hallidayboro.....	226, 380
Creighton Martha; Chicago.....	439
Davenport, Nora Soule; River Forest .....	380
Dickson, Fred C.; Danville.....	380
Duncan, Ernest J.; Olive Branch.....	301
Feser, Raymond Leonard; Chicago.....	301
Garrey, John Eugene; Aurora.....	150
Garwood, Jessie B. Pierce; Princeton .....	380
Gochnaur, Lieut. Orlando Merrill; Freeport .....	439
Grasse, Daniel Frederick, Chicago .....	150
Greer, Albert Eugene; Brownstown .....	227
Harris, Andrew Fuller; Chicago.....	74
Heil, Henry Dinkel; Decatur.....	301
Hobbs, John O.; Chicago.....	74

Honan, William Patrick; Chicago.....	380
Houghton, Estella Horton; Chicago .....	439
Hoy, Albert Harris; Chicago.....	74
Hughes, George W.; Armstrong.....	227
Hunt, Charles Cummins, Seattle, Wash. ....	380
Kerr, Robert Andrew; Peoria.....	227
Loew, Alexander; Chicago.....	74
Lovell, Frank Blair; Gibson City.....	439
Lowry, Nelson Horatio; Woodhill.....	150
Marguerat, Eugene Francois; Chicago .....	227
McEnery, John Charles; Chicago.....	226
Meyer, Herman; Chicago.....	439
Miller, Andrew Baxter; Chicago.....	380
Morse, Leroy Frederick; Cobden.....	301
Munn, Marshall Curtis; Sycamore .....	439
Ocasek, Charles J.; Chicago.....	380
Perry, Lewis Marion; Broadwell.....	227
Plummer, Jonathan L.; Peoria.....	74
Porter, Mary O'Brien; Chicago.....	439
Rainwater, James H.; New Canton .....	150
Rastall, Frank Wilder; Chicago.....	150
Ray, Blake Edwin; Cuba.....	227
Reeder, William DeH.; Chicago.....	74
Reedy, William Henry; Bloomington .....	301
Rettig, Frederick A.; Chicago.....	227
Rohu, William C.; Chicago.....	74
Saucerman, John Wesley; Winslow .....	150
Schnalling, Hannah Leah Nichols; Tulton .....	227
Sims, J. Morgan; Collinsville.....	301
Sobey, Richard; Chicago.....	226
Soteriades, Nicholas; Waterloo.....	380
Spear, John W.; Mason City.....	74
Stahl, Edward L.; Chicago.....	439
Stern, David Harry; Chicago.....	227
Stevens, Martha A.; Downers Grove .....	439
Stewart, Andrew; Chicago.....	301
Stolp, Byron C.; Wilmette.....	439
Tallman, William Lewis; Chicago.....	439
Veach, George W.; Wilmette.....	150
Walker, Ferre Joel; Maquon.....	227
Whitner, Hiram K.; Chicago.....	150
Wood, John H.; Champaign.....	439
Decompression Operation on Hypophysis. Otto J. Stein, Chicago.....	192
Diabetes, Initial Fast and Tolerance Testing. Everett J. Brown, Decatur .....	12
Dicker, Willard W. Paper.....	393
Diseases, Diagnosis and Treatment of Moral. E. N. Steun, Chicago.....	337
Doctor and the Emergency.....	132
Dodd, Oscar. Discussion.....	212
Dorland, W. A. N. Discussion.....	222
Drafting Doctors. (E).....	205
Drueck, Charles J. Paper.....	411
Dysmenorrhea, Nasal .....	326

## E

Ear, Congenital Deformities of. J. Hollinger, Chicago.....	145
East, C. W. Paper.....	256
Eclampsia, Medical and Surgical Problems of, Prophylaxis in. W. H. Condit, Minneapolis, Minn.....	406
Editorials:	
Aliens and the Draft.....	133
American Red Cross.....	421
Another Imposition.....	206
Army Roentgenologists.....	207
Arp, Resolutions of Council on Death of Dr.....	289
Baby's Milk and War Prices.....	424

Billings, Banquet to Dr.....	358
By-Laws, Changes in.....	30
Clinical Congress of American Congress of Surgeons.....	359
Conservation of Surgical Supplies .....	358
Drafting Doctors .....	205
Examination of Conscripted Men.....	207
Food Conservation .....	291
Liberty Loan .....	290
Maryland Plan .....	360
Medical Practice Act.....	135
Membership .....	290
Members in Army Service.....	206
Military Training at Age of 19.....	422
Punishing Patriotism.....	360
Resolution, Council State Medical Society .....	289
Rush Alumni .....	31
Slackers .....	290
State Hospitals New Superintendents .....	136
Tri-State District Medical Society Program .....	133
Tuberculosis and War.....	30
Tuberculosis, Resolutions on.....	289
Tuberculosis, American Review of.....	424
War Meeting for Health Officers.....	207

Edmondson, Edw. E. Paper.....	175
Eisendrath, D. N. Paper.....	272
Elliott, A. R. Discussion.....	69
Elliott, Chas. A. Paper.....	18
Emotions, Bodily Effects of Depressing. Meyer Solomon, Chicago.....	322
Esophagus, Foreign Bodies in. S. A. Friedberg .....	373
Eye and Ear Service in General Hospitals. Frank Allport, Chicago .....	182
Eye, Ear, Nose and Throat, Interrelation between. Jos. C. Beck.....	213
Eye, Foreign Bodies Removed by Magnet. Frank Allport, Chicago.....	395
Eye, Nose and Nasal Accessory Sinuses, Interrelation of Diseases of. E. C. Spitz, E. St. Louis.....	399

## F

Faith, Thos. Case Reports.....	368, 371
Falsetto Voice. Elmer L. Kenyon.....	218
Farrell, P. J. H. Discussion.....	143
Fell, Egbert W. Paper.....	267
Ferguson, R. R. Paper.....	242
Food Conservation. (E).....	291
Foreign Body, Localization. J. R. Buchbinder, Chicago .....	64
Friedberg, S. A. Paper.....	373
Foreigner a Prey of Medical Quacks. Henry R. Krasnow, Chicago.....	342
Forrester, C. R. G. Paper.....	308

## G

Gale, F. C. Paper.....	264
Grant, Sam'l G. Abstract.....	62
Garraghan, Edw. F. Case.....	212
Glaucoma and Autointoxication. Clark W. Hawley.....	371
Glaucoma and Staphyloma following Operation.....	177
Glaucoma Relieved by Eserine. A. M. Carr .....	215
Goiter, Diagnosis and Treatment. Leigh F. Watson, Chicago.....	350
Goldenburg, M. Discussion.....	66
Gonorrheal Infections, Prostate in.....	109
Gradle, Harry S. Case Report.....	372
Gradle, Harry. Discussion.....	216
Gray, W. L. Paper.....	108
Green, G. W. Paper.....	278
Grubbe, Emil H. Paper .....	384



# VOLUME INDEX

## H

Hanford, C. W. Discussion.....	99, 367
Hatch, W. G. Paper.....	178
Hawley, Clark W. Case Report.....	371
Head, Injuries of.....	1
Heineck, A. P. Discussion.....	9
Helmholz, H. F. Discussion.....	68
Helmholz, Henry F. Paper.....	311
Hemorrhage in Rhino-Laryngological Work. A. M. Corwin.....	220
Hemorrhage, Meningeal, Postoperative .....	278
Hernia, Traumatic, C. R. G. Forrester, Chicago.....	308
Hemorrhoids, Treatment of Under Local Anesthesia. Charles J. Drucek, Chicago .....	411
Hill, Emory. Case.....	211
Holinger, J. Abstract.....	145
Hotchkiss, W. M. Paper.....	23
Hubeny, M. J. Abstract.....	64
Hughes, L. J. Discussion.....	144
Hygiene in Pregnancy. Effa V. Davis, Chicago.....	250

## I

Icterus, Hemolytic.....	18
Ileus. Carl Langer, Chicago.....	317
Individualization in Treatment of Surgical Inflammations. E. H. Ochsner, Chicago.....	305
Infant, see New-Born.	
Infantile Paralysis, Electrical Treatment of. Emil H. Grubbe, Chicago .....	384
Inflammations, Surgical .....	305
Injuries of Head, Intracranial Complications. Thomas A. Davis, Chicago .....	1
Insane, Urinary Abnormalities Among .....	287
Insurance Company and Physician.....	111
Intestinal Stasis. Geo. B. Kelso, Bloomington .....	356

## J

Jacobs, Chas. M. Abstract.....	63
Johnson, Chas. B. Paper.....	122
Judd, E. S. Paper.....	229
Junkin, H. L. Paper .....	416

## K

Kelso, Geo. B. Paper.....	356
Kenyon, Elmer L. Case.....	218
Kenyon, Elmer L. Discussion.....	68, 143
Keratitis, Specific and Tubercular. E. F. Garraghan.....	212
King, C. B. Paper.....	253
Krasnow, Henry R. Paper.....	342
Kreissl, F. Discussion.....	107
Kreissl, F. Paper.....	77
Kronlein Operation. Edw. E. Edmondson, Mt. Vernon.....	175

## L

Labyrinthitis, Secondary Operation for. Otto M. Rott.....	145
Lane, Francis. Abstract.....	63
Lane, Francis. Case Report.....	372
Lane, Francis. Discussion.....	371
Langer, Carl. Paper.....	317
Laparotomy, the Lower Abdominal Incision. Henry T. Byford, Chicago .....	10
Laryngoscopy, Suspension. H. L. Pollock .....	374
Larynx, Perichondritis of. Geo. W. Boot .....	66

Leucoplakia of Tongue. Geo. W. Boot .....	66
Levinson, A. Paper.....	270
Lillie, H. I. Discussion.....	68
Lewy, Alfred. Discussion.....	146
Loeb, Clarence. Discussion.....	218
Long, Chas. H. Abstract.....	143
Long, Chas. H. Discussion.....	68, 367
Long, Chas. H. Paper.....	171
Long, Crawford W., First Anesthetist. Chas. B. Johnson, Campaign .....	122
Long, H. W. Paper.....	339
Lues, Roentgen Diagnosis of Lesions of.....	100
Lynch, R. C. Discussion.....	373

## M

Malignant Diseases of Upper Respiratory Tract. Jos. C. Beck, Chicago.....	194
Mann, W. A. Discussion.....	68
Maryland Plan. (E).....	360
Medical Practice Act. (E).....	135
Membership. (E) .....	290
Members in Army Service. (E).....	206
Military Training at Age of Nineteen (E) .....	422
Marriages:	

Aeilts, Eerko Samuel; Forreston.....	379
Bedessem, Philip M.; Chicago.....	301
Birmingham, Eugene Emmett; Chicago .....	439
Buchbinder, Jacob Richter; Chicago .....	379
Burke, Edward Joseph; La Salle.....	74
Christopher, Frederick; Chicago.....	439
Clark, Elbert; Chicago.....	150
Cook, Edgar P.; Mendota.....	439
Duffy, Hugh John; Chicago.....	226
Elvidge, Ross E. Longview.....	226
Feser, Raymond; Chicago.....	74
Fox, Nicholas Israel; Chicago.....	226
Friend, Emanuel; Chicago.....	74
Gethner, Max Peter; Chicago.....	226
Goodman, Jacob A.; Chicago.....	380
Herbst, Robert H.; Chicago.....	226
Hruby, Allen Joseph; Chicago.....	150
Kelly, Thomas B.; Du Quoin.....	226
Kelso, Leon Woodford; Paxton.....	226
Keogh, Chester Henry, Chicago.....	379
King, Ralph; Chicago.....	301
Kohler, Arvid E.; Moline.....	301
Kohn, Isadore E.; Chicago.....	226
Konapa, Joseph Florian; Chicago.....	379
Lewis, Thomas Henry; Chicago.....	150
Lindlahr, Victor Hugo; Chicago.....	301
Lush, Perry Gilbert; Chicago.....	74
McGuire, Walter George; Chicago.....	150
Meacham, Hubert Franklin; Oak Park .....	301
Meyer, Karl Albert; Chicago.....	439
Miller, Edwin Morton; U. S. Army.....	301
Nachtigall, Hans; Chicago.....	301
Niblick, Stewart J.; Chicago.....	74
Pitte, Charles Erwin; Chicago.....	150
Pratt, George N.....	74
Rest, Oscar Walter; Chicago.....	439
Rose, Milton Edward; Chicago.....	226
Schiele, William C.; Galena.....	226
Schussler, Edward G.; Oak Lawn.....	150
Walls, Francis Xavier; Chicago.....	301
Wolford, Arthur Franklin; Chicago .....	439
Zolla, Lieut. Norman; Ill. N. G.....	439
Mastoid, Abscess of. Samuel Salinger .....	298

Mastoid Disease, Indications for Operation. G. Henry Mundt, Chicago .....	352
Mastoid Operation, Terminations. Chas. H. Long, Chicago.....	171
Mastoiditis, Acute, Diagnosis. A. E. Sherman, Aurora.....	179
Mastoiditis, Acute Suppurating. Chas. H. Long, Chicago.....	143
Mastoiditis, Hemorrhagic. Geo. W. Boot .....	219
Mastoiditis, Primary. Robt. Sonnenschein, Chicago .....	167
McLin, Thos. G. Paper.....	259
Medical Legislative Work in Illinois. Don W. Deal, Springfield.....	261
Medical Legislative Work, Organization in County Society. F. C. Gale, Pekin .....	264
Meningitis, Pneumococcus. A. Levinson, Chicago .....	270
Metcalf, Walter B. Paper.....	19
Miller, I. M. Discussion.....	154
Mitchell, H. C. Paper.....	104
Mongolian Idiocy, Etiology. Mary E. Pogue .....	296
Mongolian Idiocy, Eye Signs and Symptoms of. Casey A. Wood.....	296
Moody, G. H. Paper.....	27
Moore, J. J. Paper.....	278
Mowry, A. E. Discussion.....	83, 111
Mundt, G. Henry. Paper.....	352

## N

Nance, Willis O. Discussion.....	369, 370, 371
Nance, Willis O. Paper.....	155
Nasal Affections in General Practice. Noah Schoolman, Chicago.....	314
Nasal Deformities and Bone Transplantation. L. Ostrom, Rock Island .....	169
Nasal Dysmenorrhea and Genital Areas of the Nose. L. Edwin Barnes, Chicago .....	326
Nesbitt, G. W. Paper.....	330
New-Born, Care of. Thos. Warloe, Chicago .....	28
News Items.....	72, 148, 225, 300, 378
Nitrous Oxide Oxygen Gas in Labor Dangerous to Babies? R. R. Ferguson, Chicago .....	242
Nose, Genital Areas of.....	326
Nursing, Conservation of Maternal. George Edwin Baxter, Chicago.....	381
Nursing, Conservation of Maternal (Abstract). Geo. E. Baxter, Chicago .....	64
Nuzum, John W. Paper.....	254

## O

Obstetrics, Psychotherapy in.....	339
Ochsner, A. J. Discussion.....	280
Ochsner, E. H. Paper.....	305
Ocular Disturbances in Pregnancy. Burton Cance, Philadelphia.....	221
Opacities, Treatment of Vitreous. W. H. Peck, Chicago.....	186
Operations on Biliary Tract, Why Recurrences After. D. N. Eisen-draht, Chicago .....	272
Ophthalmia, Sympathetic. Chas. C. Darling .....	216
Optic Atrophy in Tabes and General Paresis. Geo. F. Suker.....	217
Orr, H. M. Paper.....	116
Ostrom, Louis. Discussion.....	68
Ostrom, L. Paper.....	169

## P

Paddock, Chas. E. Discussion.....	222
Park, Wm. E. Paper.....	245
Peck, W. H. Discussion.....	158, 214

Peck, W. H. Paper.....	186
Pelvis, Fractures of, and Injuries to Urethra and Bladder. H. C. Mitchell, Carbondale.....	104
Personals .....	11, 148, 223, 299, 376
Pertussis, Vaccines in.....	94
Petrolatum, Liquid, As An Antiseptic. H. L. Junkin, Milford.....	416
Physician and Insurance Company. Clifford U. Collins, Peoria.....	111
Physician and Public Health. Wm. E. Park, Rockford.....	245
Pierce, Norval H. Discussion.....	66, 68, 373, 142
Pneumonia, Recent Work on Etiology of. Willard W. Dicker, Chicago.....	393
Pogue, Mary E. Paper.....	296
Points and Pointers. G. W. Nesbitt, Sycamore.....	330
Poliomyelitis, Epidemiology of. C. W. East, Springfield.....	256
Poliomyelitis, Etiology of. John W. Nuzum, Chicago.....	254
Pollock, H. L. Case Record.....	373
Pollock, H. L. Paper.....	374
Postoperative Meningeal Hemorrhage. G. W. Green and J. J. Moore, Chicago.....	278
Prostate in Acute Gonorrheal Infections. Ben D. Baird, Galesburg.....	109
Pratt, John A. Discussion.....	66, 371
Pratt, J. A. Paper.....	369
Prostatectomy, Advisability of in Presence of Cord Lesions. E. S. Judd and W. F. Braasch, Rochester, Minn.....	229
Psychoses, Incipient. G. H. Moody, San Antonio, Texas.....	27
Psychotherapy in Obstetrics. H. W. Long Elmwood.....	339
Public Health:	
County Sanitoria .....	366
Divisional Organization of State Board of Health.....	210
Doctors Respond to War's Demands .....	139
Embalmers' Law Amended.....	35
Health Officers Assigned.....	293
Health Officers Non-Residents....	36
Illinois Makes Rapid Progress....	292
Illinois State Board Examination....	140
Illinois Statistics Improving.....	365
Infantile Paralysis, Prevalence of....	140
Laws, New, Medical and Sanitary. 34	
Local Epidemics .....	365
Medical Practice Act Improved.. 34	
Military Exemption Board, Members .....	36
New State Rules for Control of Tuberculosis .....	209
Poliomyelitis .....	365
Progress in Medical Licensure in Illinois .....	210
Public Health District.....	35
Registration and Education, New Department .....	35
Sanitary Service about Rockford.....	139
Sanitary Survey at Freeport.....	139
Springfield Work in Poliomyelitis....	294
Tuberculosis Sanitoria .....	35
Typhoid in Decatur.....	139
Veneral Diseases .....	293
Vital Statistics Act.....	35
War-Time Tuberculosis Program.. 36	
Public Health and Physician.....	245
Punishing Patriotism .....	360
Pyelocystitis in Infancy and Childhood. Henry F. Helmholz, Evanston .....	311

## Q

Quack, Foreigners a Prey of.....	342
----------------------------------	-----

## R

Radium, Timeliness in Application of. Albert Woelfel, Chicago.....	97
Rainey, Warren R. Paper.....	129
Recto-Colonic Operations. Samuel G. Gant, New York City.....	62
Reeder, Wm. G. Paper.....	181
Rhinitis, Atrophic. W. G. Hatch, Rockford .....	178
Reder, Francis. Paper.....	387
Resolutions, Council State Medical Society. (E) .....	289
Ritter, John. Abstract.....	64
Ritter, John. Paper.....	416
Rochester, A. S. Abstract.....	64
Roentgen Diagnosis of Luetic Lesions. Edw. S. Blaine, Chicago.....	100
Rott, Otto M. Case Report.....	144
Rott, Otto M. Paper.....	145
Ruediger, Gustav F. Paper.....	87
Rush Alumni. (E).....	31

## S

Salinger, Sam'l. Paper.....	298
Sarcoma Cured by Radium. Otto J. Stein .....	299
Schoolman, Noah. Paper.....	314
Secretary of County Medical Society, Duties and Problems of. T. G. McLin, Jacksonville.....	259
Septum, Nasal. John A. Cavanaugh, Chicago .....	161
Sewage Disposal; Practical Methods of. Edw. Bartow, Urbana, Ill.....	248
Shambaugh, Geo. E. Abstract.....	66, 67
Shambaugh, Geo. E. Discussion.....	144, 145
Sherlaw, J. Paper.....	281
Sherman, A. E. Paper.....	179
Slackers. (E) .....	290
Slaymaker, S. R. Paper.....	92
Small, Chas. P. Abstract.....	214
Snellen Artificial Eyes, Explosion of. A. S. Rochester, Chicago.....	64

## Society Proceedings:

Adams County—Sept. Meeting....	295
Alexander County, Meeting of November 15 .....	428
Cook County:	
Chicago Medical Society, May 16 62	
May 23 and June 6.....	63
June 13 .....	64
Chicago Medical Society—Oct. 10, 17 and 31.....	428
Nov. 7, 14, 21 and 28.....	429
Chicago Ophthalmological Society. Nov. 21, 1916.....	64
Feb. 21, 1917.....	211
March 19, 1917.....	215
April 16, 1917.....	221
April 16, continued.....	295
May 21.....	368
Chicago Ophthalmological Society. Oct. 15 .....	430
Chicago Laryngological & Otological Society, Nov. 21, 1916.....	66
Dec. 19, 1916.....	141
Feb. 20, 1917.....	144
March 20.....	218
April 17 .....	298
April 17, continued.....	366
May 22 .....	373

Chicago Laryngological and Otological Society. May 22.....	429
DeKalb County:—Oct. 26.....	374
Fulton County:—Oct. 9.....	374
Greene County:—April 13.....	69
Greene County:—June 8.....	70
Greene County:—Oct. 12.....	432
Henderson County:—Nov. 6.....	433
Illinois State Medical Society, June 7, Annual Meeting.....	41
Iroquois-Ford County:—June 12. 70	
Iroquois-Ford County:—Sept. 4.....	299
La Salle County:—Oct. 16.....	375
Macoupin County:—July 24.....	223
Madison County:—May Meeting. 71	
Madison County:—June 1st and July 16th .....	147
Madison County:—Aug. 3.....	299
Madison County:—Oct. 5.....	375
Montgomery County:—Oct. 30.....	433
Montgomery County:—Sept. 18.....	375
Ogle County:—July 18.....	223
Pike County:—July 31.....	147
Pike County:—Oct. 25.....	375
St. Clair County:—June 8.....	71
Tri-State District Medical Society. Sept. 4-6.....	433
Woodford County:—May 15.....	71
Solomon, Meyer. Paper.....	322
Sonnenschein, Robt. Discussion.....	143, 367
Sonnenschein, Robt. Paper.....	167
Spitze, E. C. Paper.....	399
Splenectomy for Hemolytic Icterus. Chas. A. Elliott, Chicago.....	18
Squant, Management of. Robert Von der Heydt, Chicago.....	404
State Hospital, Purposes, Limitations and Handicaps. W. M. Hotchkiss, Jamestown, N. D.....	23
State Hospital Straits. Sidney D. Wilgus, Rockford.....	233
Stenn, E. N. Paper.....	337
Stein, Otto J. Discussion.....	298
Stein, Otto J. Paper.....	192, 299
Stremmel, S. C. Discussion.....	83
Suker, Geo. F. Abstract.....	217
Suker, Geo. F. Discussion.....	166, 212, 213, 370, 369
Surgeon's Share in Winning of Battles. G. M. Blech, Chicago.....	64
Symplepharon. J. A. Pratt, Aurora.....	369
Synechia, Operation for Anterior. C. G. Darling, Chicago.....	177
Syphilis Among Admissions to Elgin State Hospital. Egbert W. Fell, Elgin .....	267
Syphilis, see also Lues.	

## T

Tension in Normal Eyes and Ton-sillectomy. A. M. Carr.....	372
Tivnen, Richard J. Discussion....	369
Tri-State District Program. (E)....	183
Tonsil and Tuberculosis of the Cervical Glands. Walter B. Metcalf, Chicago .....	19
Tonsil Question in Children. Geo. W. Boot .....	67
Tonsils in Adults; Clinical Problems. Geo. E. Shambaugh, Chicago.....	67
Tonsils, Salient Facts Regarding. Jos. Beck, Chicago.....	141
Tonsillectomy. After Treatment. C. F. Burkhardt, Effingham.....	188
Transillumination. Findings of. Wm. G. Reeder, Chicago.....	181
Tuberculosis, American Review of (E) .....	424

Tuberculosis, Course at Different  
Ages, John Ritter, Chicago.....416  
Tuberculosis Disease at Different  
Ages. Jno. Ritter, Chicago..... 64  
Tuberculosis, Ocular. Thos. Faith..368  
Tuberculosis of Cervical Glands.... 19  
Tuberculosis of Small Bones. Chas.  
M. Jacobs, Chicago..... 63  
Tuberculosis of the Throat. A. M.  
Corwin, Chicago ..... 64  
Tuberculosis, Pulmonary, Roentgen  
Diagnosis of Early. M. J. Huheny,  
Chicago ..... 64  
Tuberculosis and War. (E)..... 30  
Tuberculosis, Resolutions on. (E)..289  
Tydings, Oliver. Discussion.....163  
Typhoid Fever, Vaccine Therapy in. 92

## U

Urethra, Injuries to.....104  
Urinary Abnormalities Among In-  
sane. Howard T. Child, Kankakee.287

Urogenital Tract, Surgical Emer-  
gencies in. F. Kreissl, Chicago.. 77

## V

Vaccine Therapy in Typhoid Fever.  
S. R. Slaymaker, Chicago..... 92  
Vaccines for Prophylaxis. G. F.  
Ruediger, La Salle..... 87  
Vaccines in Pertussis. Henry W.  
Cheney, Chicago ..... 94  
Vaccines, Specificity and Non-Spe-  
cificity. David J. Davis, Chicago. 84  
Van Blarcom, Carolyn C. Abstract. 63  
Van Blarcom, Carolyn C. Discus-  
sion .....158  
Vaseline, Deformity from Injections  
of Liquid. Geo. E. Shambaugh,  
Chicago ..... 66  
Vision, Conservation of School Chil-  
dren's. William H. Wilder, Chi-  
cago ..... 63

Von der Heydt, Robert.....404  
Von Der Heydt, Robt. Discussion.. 65

## W

Wagner, Carl. Discussion.....281  
War Meeting for Health Officers.  
(E) .....207  
Warloe, Thos. Paper..... 28  
Watson, Leigh F. Paper.....350  
Wilder, Wm. H. Abstract..... 63  
Wilder, Wm. H. Discussion...215, 217  
Wilgus, Sidney D. Paper.....233  
Williams, Wright C. Discussion...169  
Woelfel, Albert. Paper..... 97  
Woelfel, Albert. Discussion.....367  
Wood, Casey A. Paper.....296  
Woodruff, Harry. Discussion.....188  
Woodruff, H. W. Paper.....164





# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. XXXII

CHICAGO, ILL., JULY, 1917

No. 1

## Original Articles

### INJURIES OF THE HEAD, WITH SPECIAL REFERENCE TO INTRACRANIAL COMPLICATIONS.\*

THOMAS A. DAVIS, M. D., F. A. C. S.,  
CHICAGO.

Many years ago I read a report of Dr. Billings, Surgeon-General of the United States, that all soldiers who had suffered severe head injuries were relegated to the invalid corps, because it was the experience that such men did not recover from these injuries sufficiently to enable them to withstand the exposure incident to the soldier's life. There was instability of both mental and physical functions, exhibited in many ways; to the loss of sleep, to exposure to the sun, to marching, to the stooping position, to the slight partaking of alcohol, and to the excitement of battle. Any fatiguing effort would do them up completely.

Since reading the Surgeon-General's report, I have always thought of it when called upon to give an opinion of prognosis in any given case of head injury, and have felt an enormous responsibility in the cases which have come to me for surgical treatment.

While I have quoted the observation of this military statistician, I have found the same results most common in the accidents in civil life, and were it not for the hope held out by a better understanding of what is known today in the proper treatment of these cases, it would be a dismal field indeed in which to labor.

I come before you with no claims of discovery or any original theories in relation to the subject to be essayed, but I feel that with a quite extensive observation, both in hospitals and outside practice, and with the conviction that the profession in general has not qualified itself as it

should in this branch of surgery, that I may be justified in accepting the short space which has been allotted me on the program.

The only conditions of head injury which have been dwelt upon at any length in the many textbooks of surgery for many years are those of skull fracture—fracture of the vault and fracture of the base, and the complications—hemorrhage from ruptured middle meningeal artery, and depression of bone fragments.

Theories as to how fracture is caused, and as to the determination of its lines—the latter very much modified since the x-ray demonstration—mystified the student. These together with the very limited information offered as to the treatment, started the young physician and surgeon out not only poorly equipped to undertake the treatment of head injuries, but without any idea of ever acquiring much more knowledge of the subject.

Fractures of the vault have been treated, where apparent depression existed, by elevation of the depressed bone; fractures of the base by the expectant plan, the suturing of the scalp wound and the ice cap, and attention to the bowels have completed the measures to restore any or all of the immediate effects of head injuries. The sequelae, epilepsy, headaches, paralysis and insanity, which are so common, have been dealt with, with little knowledge of the real pathogenesis and pathology of the affections, and consequently very few recoveries have been known to follow any given treatment.

Based on the idea of bone pressure cause, various sized areas of bone have been removed, or adhesions, removal of the dense fibrous tissue, and various elastic transplants inserted, and on general increased intracranial pressure, subtemporal or suboccipital decompression operations have been done; yet all have failed in a great measure to benefit permanently the patients, and it is probable that no measure of relief will be given these patients from any operative inter-

\*Read before the Sixty-seventh Annual Meeting of the Illinois State Medical Society, Bloomington, May 10, 1917.

vention. Late treatment, therefore, of the complications and sequelae of head injuries and intracranial tissue is of little permanent value.

The failure to improve conditions from the numerous operative interventions that have been devised, has been due to the inability of the methods employed to restore the anatomic cells and nerve tracts to a normal functioning basis. The operations which have been done have been of the surface of the brain, and a remark which I heard Dr. Cushing make last year in regard to epilepsy applies, in my opinion, to the whole group of late sequelae of intracranial injuries.

Dr. Cushing was operating on a focal epilepsy case at the Peter Bent Brigham Hospital in Boston. The probable diagnosis of neoplasm had been made. The operation did not reveal the tumor, but there were some surface adhesions over the area investigated. I understood Dr. Cushing to say that he did not think it would do any good to disturb the brain surface as the deeper structure was likely involved. He closed the big bone flap after excising a large area in its center, including its dura, doing his subtemporal decompression operation to relieve the increased general intracranial pressure. My inference from Dr. Cushing's remarks was that he did not think much of operative intervention in old cases of traumatic epilepsy.

The writer regards the subject of the late surgical intervention in the sequelae of serious head injuries with intracranial complications as a closed book. There is no reasonable basis for a hopeful prognosis from any treatment. The above statement is intended in particular for the so-called traumatic epilepsy, insanity, headaches and other neuroses. Traumatic cysts should, of course, be evacuated or removed, and focal epilepsy, on account of its occasional temporary relief may, with propriety, still be subjected in certain selected cases to surgical operative investigation.

Like the general suppurative peritonitis and the too far advanced carcinomata, we must assign these cases with the hopeless and often with the same sad reflection as to the neglect of proper early treatment. There is no doubt but that we must direct all efforts of expectancy to the immediate surgical treatment in cases of injuries to the head with intracranial involvement. The treatment, surgical and otherwise, must with

scientific precision apply to the conditions determined by careful diagnostic means, a treatment based upon the necessities for restoration of injured cells, fibers and vessels.

The wounded intracranial tissues must be treated in accordance with the well known surgical principles—removal of foreign bodies, arrest of hemorrhage, and elevation of depressed bone, elevation of the wound to favor circulation, and rest; prevent undue compression against the unyielding cranium, which may cause edema or ischemia of the tissues with subsequent degeneration.

It is with the idea of stimulating the close study of every serious head injury, the using of every means which we have to determine the correct anatomic diagnosis, and then of applying a treatment which comprehends in the patient every deviation from the normal and the application of every surgical principle indicated for its correction. There is no doubt but that the application of the knowledge which is at our command today offers a favorable prognosis as to permanent cure, in a considerable percentage of the cases which in the former times referred to in this paper would have been relegated to the invalid corps.

The study for diagnosis of head injuries with intracranial complications should proceed in the following order:

1. The history of the case.
  2. The exclusion of simulating conditions or disease.
    - (a) Alcoholism.
    - (b) Uremia.
    - (c) Apoplexy.
    - (d) Cerebral hemorrhage, etc.
  3. Visual examination of head: Eyes, ears, nose, mouth, mastoid, orbit, neck, scalp, cranial nerves.
  4. Reflexes, muscular tonus. Thorough neurological analysis.
  5. Visual examination of the wound and instrumental exploration in open wounds, likewise of closed wounds where necessary. Palpatory examination of head.
  6. X-ray.
  7. Spinal puncture. Character of fluid, macroscopic, microscopic, chemical reaction, pressure.
- Owing to the brief time which I have to treat my subject, I will omit the diagnostic headings



of history and the differential diagnosis which are treated so generally in text-books, and begin with the *visual examination of the head*, also omitting the generally studied special significant signs of the eyes, ears, nose, mouth, mastoid, orbit and neck.

The wound should be explored as we would do in one of the abdomen, by immediate operation, enlarging it if necessary so as to see positively whether or not there is skull fracture. If the wound be a contusion, with no loss of surface continuity, and there be the symptoms of intracranial complications, the skull should be examined by incision at the seat of contusion, and such other regions as may be at the time or later specifically indicated. Should a fracture line be found, there is no place to stop; we are still on our way towards the large serous cavity with its important organs which demand the same protection as the peritoneum. Though the intracranial simile does not pertain as to inherent septic elements, gut contents, the fact that all open head wounds are septic makes it imperative to follow them to their conclusion for antiseptic treatment, unless such procedure involves greater danger to the patient than seems justifiable, a nice point to be determined, one which taxes the most experienced and skillful operator at times; also when there is a decision to render as to whether or not there may be already a protective adhesion as a barrier to a deeper infection of the wound which primarily penetrated the brain membrane. As a rule, however, the wound should be followed through the skull in the tract of the open scalp wound after proper sterilizing means have been applied, and the dura carefully inspected. Should the wound go deeper, sufficient bone should be removed either by trephine and rongeur, or by an ample bone flap to allow complete exposure of dural laceration.

We are now in the great serous cavity, with its still greater number of minute and larger recesses and vital structures than the peritoneum and must proceed by as important and methodical a system of investigation as has been so efficiently evolved for that structure. We cannot eviscerate and examine this cavity as is the rule of the peritoneum, and, therefore, visual inspection for bleeding points is much more limited, but by the systematic investigation method at our command extensive areas can be reached and many hemor-

rhages controlled. Foreign bodies, fragments of bone, etc., may be carried into the gap of the cranium beyond visual reach. Likewise, the penetrating missile of gunshot and the deep laceration of tissue of the bullet in the explosive zone may offer insuperable difficulties to inspection of hemorrhagic points; and the contrecoup injuries, probably like those of the bullet in the explosive zone, due largely to hydrodynamic impact and impulse, give rise to deep-seated hemorrhages which with difficulty only can be located.

One should always have in mind the focalizing centers in studying head injury cases. Often, on account of the very diffuseness of the injury, or its confines within the limit of the silent areas, a definite area disturbance is not manifested. At times, such focal signs stand out so prominently that it is pathognomonic (C. C. H. case; acute confusional insanity, aphasia; policeman's son).

In this case had the rule for investigation of such wounds been followed out, there would have been no need for such study because the symptoms were late, that is, they appeared after the reaction from the concussion after the patient had walked home from the doctor's office.

This interesting case was that of a boy, a police-lieutenant's son, who was brought to my clinic at Cook County Hospital several years ago by his father on a Tuesday morning. The Saturday night before, in a saloon brawl, he was struck in the head with a beer bottle.

He fell unconscious to the floor and in a few moments was up again. There was a wound about two inches long in the left temple. He was taken to a doctor's office on his way home where a half dozen skin stitches were put in and a compress bandage applied. He walked from there to his home and went up stairs to his bedroom. His father stated, in my trying to obtain a history, that he had heard his son moaning, and also walking around during the night. The next morning the boy seemed irritable and somewhat peculiar (irrational, my interpretation). He continued in this condition with headache and speech difficulty until he appeared at the clinic.

I found a fine physical specimen of a young man, but with rather an unnatural stare of countenance, and when I with my hand on his shoulder offered him a chair and asked him to be seated, he pulled away from me in a frightened manner and exclaimed something unintelligible to me which later, he said, were "dingases here," and he gazed about the room up toward the ceiling mostly. I recognized a traumatic acute insanity and aphasia, and advised immediate operation for an intracranial complication of a head injury, stating that there was, in all probability,

a skull fracture with depression involving the speech and high pschical centers.

The father wanted consultation. The boy was assigned a bed and seen that afternoon by two of my colleagues, staff physicians, whose verdict was, "What is the matter with Davis? That boy has simply concussion; no operation indicated." That night, Tuesday, I was called out of bed as the boy had a convulsion. I had a special nurse put on the case, with instructions to watch if further convulsions occurred, the manner in which the convulsion began, etc. The boy had a number of convulsions before I operated on him the next morning (Wednesday), and every fit began with throat symptoms, choking, and then the right side of face, fingers and so on to a generalization of the whole body. In this case, after removing stitches, a transverse wound through the temporal muscle just above the zygoma and a gutter fracture about two inches long, depressing quite deeply, were found. There was a considerable extra and a small subdural clot, and a small fragment of skull penetrating the dura into the brain, lacerating it slightly, which fragment had torn the anterior branch of the middle meningeal artery in such a manner as to control the bleeding somewhat. I will not go into the details of the operation. The patient had no further convulsions, and the following day seemed quite normal in every way. I kept track of this boy for eight years. He remained well and was working for the Chicago Telephone Company in construction work at the end of that time.

While I am still on the subject of focalizing symptoms, I wish to emphasize the importance of the most thorough familiarizing of the known physiological areas of the brain by the whole profession, for it is my opinion that the evolution of the subject of brain physiology depends largely upon the correlative observations of physicians and surgeons.

A small lesion may involve a single physiologic area with corresponding phenomena. Later the lesion becomes diffused or exerts by pressure, circulatory or degenerative process, a very obscure picture. Should the family physician not have noticed the earliest phenomena, the history given to the neurologist would lack the only information to make a diagnosis, and further, when the surgeon came to operate, knowing nothing of the early symptoms, chancing upon a lesion in his operative exploration would conclude, "another lucky strike in a silent area."

Physicians do not, as a rule, observe these phenomena as they should, or they would carry to the neurologist information which would often be a great aid to diagnosis.

A case which I have in mind will further illustrate this point. Cook County Hospital. Patient, a young Irish lad, a bank messenger, gave up his position during the World's Fair on account of headaches, vomiting, and failing eye-sight. I saw him with Dr. Fleming, house physician, who informed me that the patient had been under the different staff services for 18 months. He was then under Dr. Herrick. The patient had been having numerous convulsions each 24 hours for many months, the convulsions increasing in frequency and severity. He was totally blind. Dr. Fleming said that the patient had been expected to die for some days. The diagnosis was cerebellar tumor. The case was thought inoperable and hopeless. He was extremely emaciated. I will not go into the complete analysis of the case, but just wish to state my observance of a symptom which led to operation and restoration to perfect health. The patient lay in the little iron bed, his head to the east as I entered the room from the west. His bed was against the south wall of the room. As I approached the bed he half arose and reached out and downward with his hands as though he were anticipating resisting something from some one approaching him. His face depicted an expression of fear and suffering. I walked up to the bedside and was about to touch his body, which was covered with but a sheet; it was in the summer time, and he grasped my wrist with both his hands and said, "Oh, don't touch me." I assured him I would not hurt him at all and patted him on the right shoulder and head, and as he seemed quieted down I continued with the examination. When I came to test the reflexes of the left lower limb, he immediately repeated the agonizing expressions and begged me not to touch that limb.

Now, it was that "sensory disturbance" which determined the diagnosis in my mind, and I told Dr. Fleming that the lesion was in the right parietal region, the sensory zone, and I advised an operation. Dr. Church was called in, examined the patient, and said that there was no objection to exploring the cerebellar fossa. I said that I would do so if, in the event of finding nothing, I would be given consent to explore the right parietal region. This consent was given. The patient was transferred to my service on the surgical side of the hospital and the cerebellar fossa explored with negative results as to findings. A week later I made a large flap over the right parietal region and the pathology was found. The skull was attenuated to a thinness so that it would yield to finger pressure, and a simple cyst about the size of an English walnut was found. It was subcortical, but very close to the surface of the brain which was edematous over a considerable area. The cyst was partially removed; the wall was very thin and gave way in my effort to shell it out so that part of it undoubtedly was left.

This patient recovered completely, all but his eye sight, gaining 35 pounds during that summer, and leaving the hospital able to walk about and enjoy



himself. Two years afterward I received a letter from Belfast, Ireland, stating that he was well and attending a school for the blind.

Now, I do not adversely criticize the medical men who attended the case before I saw him because the symptom which I found may not have been so presented nor even elicited at the time of their visits, and without it the cerebellar location was most probable, but I do wish to see greater familiarity shown with the known physiological brain areas by the family physician with the view of recording transitory symptoms and eventually leading to a more correct diagnosis.

To return to the topic of visual inspection. In case where the wound is followed to the dura, and that structure appears not to be lacerated, if there is a loss of brain pulsation the dura should be incised. There may be disintegration of brain tissue beneath or a deep-seated clot; such pulpified brain tissue or clot should be, as any foreign body, removed because of its danger of septic infection and anyway causing cerebral compression. The opening of the dura may be delayed where there is apparent risk of infection from the outer wound, and should increased intracranial pressure demand, a decompressive measure may be carried out elsewhere.

Omitting the extracranial, we will briefly consider some of the surgical intracranial hemorrhages, those that can be controlled by some means at our command. First, hemorrhage from the middle meningeal artery. The intracranial complications from wounds of this artery are nearly always delayed from the time of the injury, so that the lucid interval is the pathognomonic sign. The firm attachment of the dura to the bone renders the pressure displacement of the dura slow, and the blood forces its way upward following the anterior branch usually over the pre-Rolandic area, causing the focal symptoms of contralateral motor disturbance which may be recognized before the symptoms of general cerebral compression develop. The focal symptoms may be obscured because of the primary damage to the brain.

Thorough history taking and skillful observations are often necessary to forestall an error in diagnosis in these cases.

An error which is still commonly made by those we do not follow the rule for thorough exploration of scalp wounds is in thinking that there is

not likely a skull fracture because of the bulging over the traumatized temporal region, and the absence of depression on palpatory examination. The contused and blood extravasated temporal muscle bulges without a rupture of the middle meningeal artery, although more so with it, and sometimes, when that vessel is torn, pulsation can be felt in the swelling, and in which case it may be observed that by applying pressure to the tumor the brain compression symptoms are intensified, increasing the depth of unconsciousness or by causing contralateral convulsions. Again, most often the skull fracture extends to the base through the tegmen tympani, middle ear, membrana tympani, the blood escaping more or less profusely from the external ear. In such cases the plugging of the ear gives rise to increased intracranial symptoms.

In the operation for the arrest of hemorrhage from the middle meningeal artery, especially where the fracture extends to the base, quite extensive bone resection may be necessary. After turning out the blood clot, the place of rupture may be seen and the vessel secured by short curved needle and sutured. Should the profuse hemorrhage come from deeper towards the base, the space may be packed for a few moments, and then with brain spatula the brain may be pressed upward, exposing the bleeding from the vessel at its exit from the foramen spinosum. A plug of wood, a match, or other prepared substance may be driven into the foramen. If the patient's condition will permit, it is better to make great effort to secure the hemorrhage absolutely for packing or gauze plugging is most highly objectionable on account of its immediate and remote effects.

In proceeding to close the wound and bone defect, first see that the hemorrhage is completely stopped, and that the brain has expanded to normal and shows the normal pulsation. Then suture the dura, leaving a little room between the stitches for serous discharge; replace bony wall as completely as possible, returning no fragment which is under suspicion of septic contamination. An extradural cigarette drain for 24 hours may be used if indicated from condition of wound oozing, or from unsatisfactory technic. Like the peritoneum, the intradural structure calls for less frequent drainage.

The after treatment consists of morphin, head elevation as soon as patient reacts from the shock,

lumbar puncture, as indicated, decompression opposite side (rarely needed), calomel, restricted diet, and three months quietude. The details of the treatment will be more fully taken up after considering subdural hemorrhage, brain wounds.

Subdural hemorrhage may occur from laceration of the small surface arteries and veins and extravasate slowly over a large surface area of the hemisphere involved, giving rise to no striking symptoms for quite variable periods—from a few hours to two or three weeks time—which has been called the latent period of subdural hemorrhage. The symptoms after the concussion reaction appearing as mental excitability, sleeplessness, restlessness and headache, muscular twitchings may occur on the opposite side of the body. These symptoms to be followed by drowsiness, slow pulse, etc., should the hemorrhage continue or other conditions arise to occasion increased intracranial pressure. This kind of hemorrhage should be controlled by fine catgut suture, or if the friability of the tissue seems to prevent the suture from holding, a piece of muscular tissue from the temporal muscle may be planted over the bleeding surface or a transplant of fascia from the fascia lata.

Hemorrhage from the venous sinuses may be so rapid as to render the latent period too short for notice or even absent. The compression symptoms become rapidly pronounced. The patient becomes unconscious, with full pulse and stertorous breathing, soon to develop the rapid feeble pulse and Cheyne-Stokes respiration, and paralytic symptoms which are precursors of a fatal issue in cases not operated on. When this source of hemorrhage is discovered in operation on the case of skull fracture, it may be arrested by suture or by a piece of muscular tissue held against the open sinus for a short time until agglutination by clot formation. The blood pressure in the sinus is so low that the hemorrhage can easily be controlled. Should compression symptoms continue after the operation, they should be relieved by spinal puncture and, if necessary, by decompression on the opposite side of the cranium. We should always have in mind the fact that subdural hemorrhage is most commonly due to contrecoup force and in any case where the compression symptoms are all out of proportion to findings at the seat of the direct injury, as found during the exploration of skull fracture,

we should explore the opposite side of the brain even without focal symptoms.

A case which I operated upon some years ago for Dr. J. S. Nagel, at the West Side Hospital, illustrates this point very well. The patient had sustained a compound fracture of the vault from a fall downstairs. The direct violence was extended over the parietal boss on one side. The patient showed moderate compression symptoms at the time of operation—second day. The fracture was explored and a small subdural clot was removed. The cortex around the clot seemed normal; the brain pulsation returned at once. The wound was closed without drainage. The patient reacted from the shock nicely and seemed to progress for a day or two, when compression symptoms recurred and increased until the end.

The autopsy in the case made an impression on me which I shall never forget. The whole brain was carefully removed and dissected and the cause of death ascertained to have been due to slight cortex laceration, with subdural hemorrhage and consequent edema and softening on the opposite side from the fracture. The proper surgical intervention, a decompression on that side, would undoubtedly have saved the patient's life.

Where the source of the hemorrhage is obscure and the flow of blood profuse, gauze packing may be resorted to. I had one such case recover in my service at the Cook County Hospital. I used a number of long strips of gauze, packing it in pretty tightly too, for the hemorrhage was terrific. Usually such packing increases the shock and compression symptoms and does not arrest the hemorrhage.

Foreign bodies, fragments of bone, etc., should be removed at the primary operation when practical, that is, when there is no question but that a piece of the inner table is carried into the brain tissue. It should be carefully searched for by the finger if the wound is of that size, and carefully extracted by a suitable instrument which will do the least damage; a blunt scoop or curette is preferred. It is unfortunate that we still have to do finger exploration, but it is necessary. Instrumental excursions are dangerous and even after x-ray location of a foreign body one usually has to use the finger. As the detached fragments of bone which are carried into the brain are usually sterile, coming from the inner table, such as can-



not be readily found may later be revealed by the x-rays and removed by a second operation. If the contaminated bone fragments in the open wound are removed and the wound sterilized, much will have been accomplished.

*Intracranial Drainage.* The difficulties to be overcome in attempting to secure intracranial drainage are in the first place the very numerous pockets and crevices in the anatomic brain and membrane structure, and secondly in the physical character of the tissue to be drained, so friable that the pulsing wave will carry the brain matter into tube and gauze structure, plugging every exit. Like the Culebra Cut, it is always filling in. Both benign and pathologic exudates may seal the avenues of escape and thus close off from the drainage various infected foci. And again, the drain itself is a menace. The ridged tubular drain may damage the delicate brain tissue even when most carefully placed, and under returning normal brain pulsation and pathologically increased intracranial pressure, most serious consequences may result. Gauze is notoriously bad as a drain. It loses its capillarity very soon and may cause ischemic pressure necrosis. Like the peritoneum, the intradural tissues are being more rarely subjected to direct drainage, and like the peritoneum, the reward is shown in the larger increased percentage of recoveries. However, drainage has its indications. If the brain is septic it must be drained, and if a localized abscess can be determined it must be drained. The choice may be either a fenestrated rubber tube or the perforated metal. In either case care should be taken not to carry the tube too deeply.

Hull<sup>1</sup> thinks the most satisfactory manner in which to drain an abscess of the brain is probably by means of hypertonic saline solution combined with capillary drainage. The apparatus consists of an ordinary woven bandage, a strip of thin rubber tissue, a silver wire, and a fine rubber drainage tube. The silver wire is doubled upon itself like a hairpin, the loop being the part introduced into the brain. It is protected by a covering of rubber tissue, the end of the bandage is folded in its length, enclosing the introducer, and the rubber tube is attached by a stitch. This forms a drain which can be introduced into the brain to the desired depth. The drain is bent at a suitable length and now forms a right angle. One extremity of the drain passes into the wound while the other is fixed to the scalp by a suture or strapping.

The capillary drainage of an ordinary two and a half inch bandage is sufficient to draw normal saline from one vessel to another twelve inches lower at the rate of over a pint in one hour. The free end of the bandage is placed in a tray containing some saline, the tray being about twelve inches below the patient's head. By means of the rubber tube, hypertonic solution is introduced into the wound. Irrigation of cerebral abscess is said to be dangerous on account of possible spread of infection by the fluid to the meninges. This will not happen after the first twelve hours of drainage.

Sargent "considers that, as a general rule, superficial laceration of the brain is best treated without drainage, and deep laceration two inches or more in depth with drainage."

*X-Ray.* It has been my rule to operate on all cases of open wounds before having an x-ray taken, and then with the head properly bandaged the patient is taken to the x-ray room for study.

The largest percentage of trouble, sepsis, will then have been excluded, and the subsequent removal of foreign bodies, etc., will be made an elective procedure. Should general increase of intracranial pressure demand before the localization of the foreign body lumbar puncture repeated, and if that does not give relief, a decompressive operation should be done. The x-ray, of course, is a most valuable diagnostic aid and the skiagram should be in evidence in every case history.

*Spinal Puncture.* It is not easy to define the conditions which call for this procedure. Various theories are still being studied involving questions of physiology, pathology and therapeutics.

I have been unable to ascertain that the amount of the cerebrospinal fluid and its current flow are understood as yet, and without this knowledge we do not know the pathological significance of the analysis of the spinal fluid taken at given points and at stated times in relation to intracranial trauma and disease.

If the determination of the blood to the lower spinal pouch is due largely to gravitation, one would not expect to find blood in the fluid as soon in these cases of head injuries where the patient remains recumbent from the time of receiving the trauma. While nature does not usually plan for accident to carry through her work, the clinical evidence which I have observed is rather presumptive that gravitation is the prime factor in determining blood in the spinal fluid in head in-

#### BIBLIOGRAPHY

1. Hull, A. J.: *Surgery in War*, 1916, P. Blakiston's & Son Co.

juries. In every case in which I have made spinal puncture, where the patient had been up or sat up for a time after the injury, I have found the blood in the spinal fluid. In some cases which have been unconscious from the time of injury, I have found no blood at first puncture, but it has generally shown within two or three days. I have observed the spinal fluid clear in early fatalities where autopsy showed extensive intracranial hemorrhage with lacerated meninges. Of course, one would not expect to find bloody fluid in cases where the laceration did not involve the meningeal or ventricular structures, and one can readily understand how the removal of spinal fluid, by increasing local pressure at the outlet of the skull at the foramen magnum, has resulted in a fatality in some recorded cases. Notwithstanding the incompleteness of our knowledge of the many principles involved, we can sustain certain theories which fit the facts gathered from clinical experience that spinal puncture affords prompt and marked relief to the highly compressed brain tissue in many cases of intracranial injury, and that this intervention with proper medical treatment is all that is indicated to enable the re-establishment of a normal circulatory condition and maximum regenerative effort in the damaged tissues. Nerve cells, as is well known, are the most sensitive of our tissue, easily destroyed by injury and starvation. Another well known fact is that starvation is threatened by reason of increased intracranial pressure in every case of serious head injury. It is, therefore, imperative that the earliest possible attention should be given to spinal puncture as a means, directly or indirectly, to bring about a prompt lowering of the intracranial tension. I mention indirectly because it has not seemed possible to me that the removal of few c.c. of spinal fluid should directly have lowered the volume tension within the cranium in a number of cases which have been under my observation.

With the instruments of precision now at our command, there should be little harm from the procedure of spinal puncture. I use the Landon manometer as devised by Dr. Fraser, of Philadelphia. The needle and small tube outfit of this apparatus enable one to determine the pressure and take the smallest amount of fluid necessary for diagnostic purposes, and with the bypass terminals so that one can be prepared to return fluid

into the canal immediately should an indicative exigency arise. My opinion is that should the fluid be found clear and the intracranial pressure very high, it would be better to do decompression at once. If the symptoms are not threatening, repeat the puncture again and again at the interval of from four to eight hours, increasing the amount of fluid withdrawn, if no respiratory or cardiac embarrassment has developed from previous punctures. I would not wait longer than 48 hours for improvement under spinal puncture before doing a decompression operation, and then should the pressure rise persist after the decompression, I would make spinal puncture proceedings again. Usually, after a thorough decompression with dural incision, there is no further indication for spinal puncture. Careful record should be made of the pressure of the fluid and of the physical and chemical findings of the same.

*Decompression.* Some surgeons have discarded spinal puncture as a therapeutic measure and resort to the decompression bone operation. With these, as aforesaid, I do not agree. However, the immediate necessity may demand the more positive proceeding.

The decompression may be done at the time of the primary treatment of the scalp wound when the skull fracture is found, providing there is indication for such decompressive measure. It may be done through the scalp wound when the surgeon is confident of asepsis, but where there is any question as to infection the decompression should be done on the opposite side. I follow the technique of Cushing in this operation. Both in spinal puncture and decompression operations the surgeon should have in mind the dangers of suddenly lowering the intracranial tension; those of increasing hemorrhage, the spreading of sepsis by the breaking away of meningeal adhesions, and the disturbance of the cardiac and respiratory centers.

#### IN CONCLUSION.

The thought which I wish to emphasize in this brief paper is that all serious head injuries call for emergency measures which cannot wait for transportation to distant hospitals and to the surgical specialist for a most important, the first treatment. These cases present themselves all over the country and with particular frequency since the advent of the automobile. The lay press



testifies to the daily occurrence of such head injury cases from coast to coast, and it is safe to assume that in but a small percentage of the cases have the proper means been carried out to save life. Every doctor should be prepared to give the proper first aid to these cases.

Head injuries with demonstrable brain lesions should be operated on at once. The earlier the high intracranial pressure is anticipated the better, even before the patient has reacted to the concussion or shock. The withdrawal of a small amount of spinal fluid repeatedly may relieve the concussion symptoms, so that in any case not moribund I would do a spinal puncture. Unwarranted intervention in hopeless cases will occasionally be done, but boldness in applying the surgical principles involved in the treatment must be insisted on as the only means of reducing the heretofore enormous mortality or the permanent invalidism of these cases.

The latest experience in the present war has shown an astonishing lowering of the mortality by operating on head cases in the ambulances and other emergency depots, and not waiting for transportation to base hospitals. In civil cases, likewise, the results of early and proper operative intervention have shown a great reduction in mortality.

Sharpe<sup>2</sup> (New York Policlinic Hospital) last year reported 239 cases with a mortality of 30.7 per cent., and states that "if we exclude the moribund patients who died within three hours after admission to the hospital, then the mortality would be only 19 per cent." Compare this with the report of Besley<sup>3</sup>, 1,000 consecutive patients having fracture of the skull in Cook County Hospital, with a mortality of 53 per cent., and the report of Sharpe of three of the large hospitals in New York, with a mortality of from 46 to 68 per cent. Sharpe says, "It is the attitude of comparative hopelessness in the treatment of brain injuries that has allowed these cases to be almost neglected in the general hospital."

While it is not my expectation to arouse an ambition in the minds of the whole medical profession to be a Cushing, Fraser, or Sharpe, or many others of deserving fame, I feel that I should expect every doctor to qualify in the technique of head wound disinfection and the treatment of such cases so far as the general surgical prin-

ciples are concerned, and specifically to treat hemorrhage and the consequent threatening intracranial pressure which may demand the same immediate attention to save human life as in his cases of postpartum hemorrhage. Later on the need must be felt by most men for the skill of the neurologic surgeon when the most intricate and difficult problems must be solved.

#### DISCUSSION

Dr. Heineck thought that the mortality of skull fracture can be somewhat lessened by more adequate mastery of the subject. In fractures of the base of the skull, treated by expectancy, the patient will die. By lessening the increased intracranial pressure life can be saved occasionally but it can be lessened in only one way because the skull is unyielding. We can lessen it sometimes by repeated lumbar punctures. We can lessen it by unilateral decompression. We can lessen it still better with less cerebral disturbance by bilateral decompression.

In a recent case the patient recovered, if not on account of the bilateral decompression he recovered in spite of it. It was a case of basic skull fracture in which with the assistance of an ophthalmist, the gradually increasing intracranial pressure could be determined.

He thinks that in every case of fracture of the vertex, in every case of fissured fracture and other fractures, operation is indicated.

In those cases exploration is indicated because usually the fracture of the internal table will be more extensive than the external table. No harm will be done and perhaps the patient may be saved from a future uselessness by the removal of decompressed fragments of bone.

Dr. O'Bryne called attention to the fact that we are getting more skull fractures since we are riding a little faster than we used to—not only the fellow that is riding but the fellow that isn't riding. He reported a case that came under his care a year ago of a little girl struck by an automobile and knocked down.

There was no external evidence of injury on the scalp. She had the usual hair of a girl, nothing showed externally whatsoever and the doctor who was called put her to bed and waited. In three hours the family called him back. The child was vomiting. He was called immediately and found the child in a semi-conscious condition, widely dilated and irregular pupils, irregular heart beats. By palpation over the skull he could feel a depression. She was taken to the hospital at once and prepared for operation.

First an incision was made and brain substance came out through the wound along with blood. There was a large decompressed fracture—two large fragments driven down tearing a great hole in the dura. He removed one of the fragments; lifted the other fragment and it locked right into place between the

2. Sharpe, William: *Jour. A. M. A.*, May 13, 1916, p. 1536.

3. Besley, F. A.: *Jour. A. M. A.*, Jan. 29, 1916, p. 345.

bones of the skull. It was impossible with it in place to sew the dura; drainage with fibers of silk worm gut, replaced the fragment bone and closed the wound.

The child went home in a week, made an uninterrupted recovery, and now at the end of a year is apparently healthy and normal.

The Chairman: If there is no further discussion we will ask Dr. Davis to close the discussion.

Dr. Davis: I will not take any more of the time of the meeting. I omitted so much of my paper that made the important points that I will leave the paper to show in answer.

## THE LOWER ABDOMINAL INCISION.\*

HENRY T. BYFORD, M. D., F. A. C. S.,

CHICAGO.

With regard to the abdominal incision, I will divide operators into two classes, viz., those who believe in always making it long enough and those who believe in always making it short enough. The former believe that the latter often do imperfect work for the want of room, the latter believe that the former often do harm by unnecessary traumatism and exposure.

In order to show that both sides may be right in their opinion, while not always so in practice, it will be necessary to particularize, since the difficulties which attend abdominal operations below the umbilicus for pelvic conditions require a somewhat different technic from that of operations higher up.

The chief of the difficulties which we encounter in the operation below are that the bottom of the pelvis is far beneath the cutaneous surface, and important work cannot be done in the pelvic cavity without a long incision; and that the upper part of the abdominal cavity is so restricted in available space on account of the presence of the solid viscera, the projection of the spinal column, and the play of the diaphragm, that it is often difficult without considerable traumatic manipulation to keep the intestines up and away from a low incision.<sup>1</sup>

Particularizing our cases we find that we can keep the intestines out of the way in a class of emaciated and relaxed patients by placing them in the Trendelenburg posture and thus make use of a long incision without fear of intestinal complications. Then we will find that in another

class of cases we can operate through a short incision without much disturbance of the intestines. Then there remains a class in which complicated or difficult intrapelvic work will always require a long incision and the forcible packing of the intestines up out of the pelvic cavity.

I wish to call attention to the possibility and desirability of limiting the long incision and the forcible packing away of the intestines to the cases actually requiring them, instead of commencing the operation with a long incision before the necessity for it has been determined. I am sure that most of us know of cases operated upon through long incisions in which the work may have been successful but in which the patient has suffered for years from symptoms due to extensive intestinal adhesions. I have performed second operations upon such patients, and have often found that these extensive adhesions involve the intestinal coils, and thus cause much more discomfort and disturbance than the original adhesions which are usually only between the omentum and the pelvic organs. In some of the cases there had been no adhesions before the operation. Such experiences have taught me that manipulation, exposure and soiling of the intestines are greater sources of danger than the actual amount of cutting.

There is a large class of cases, as I have already intimated, that can be operated upon through a small incision without packing away the intestines, sometimes even without placing anything over them except omentum, and without touching them with anything but the gloved fingers. It includes operations on small uterine myomata, ovarian pediculated tumors small enough to be delivered through an incision that will admit the half hand, and operations on diseased uterine adnexa, the round ligaments, bladder, fundus uteri, etc. Pelvic adhesions can usually be separated by the fingers through the short incision, and the tumor or ovary or tube then be brought up to the surface very much the same as in cases without adhesions. Ovarian cystomata of considerable size, consisting mainly of one large cyst, can often be reduced by evacuation, and removed through a small incision without disturbance of the intestines.

When there is doubt about the kind of operation that will be required it is better to explore

\*Read before the Sixty-seventh Annual Meeting of the Illinois State Medical Society, Bloomington, May 9, 1917.



through the small incision and enlarge it subsequently if necessary or desirable.

When the parts to be operated upon have been delivered it sometimes suffices for the protection of the intestines to adjust the omentum under the incision and then unite temporarily the parietal peritoneal edges of the upper half or third of the incision with clamps or forceps, so that the pedicle almost fills the remainder of the opening. A gauze sponge can then be laid over the incision and the operation be practically completed extra-peritoneally, unless other work is required.

When there is oozing from adhesions that have been broken up, the fluid can be evacuated without allowing air into the cavity, or touching the intestines with anything except a glass drainage tube which is introduced to the bottom of the pelvis. The fluid can be sucked through it by a syringe to which a small rubber tube has been attached.

The glass tube should be left in place long enough to show how much, if any, bleeding is taking place. If oozing persists and there is a decided objection to a long incision and displacement of the intestines, a polished metal or silvered glass tubular speculum can be introduced in the place of the glass tube with the possibility of discovering bleeding points or of treating them through it. If necessary the eul-de-sac of Douglas can be packed and the end of the gauze be brought out through a vaginal puncture; or there is still time to enlarge the incision and pack away the intestines and complete the operation satisfactorily.

Ordinarily the short incision should be long enough to allow the introduction of the half hand for the exploration of the lower abdomen although the pelvic work can often be done through a shorter one. When the incision is longer than this it usually becomes necessary to pack away the intestines, and the chief benefits of a small incision are lost. If the patient is thin and the abdominal walls relaxed it is often possible to hold out the upper end of the abdominal incision by a retractor so that, in the Trendelenburg posture, the small intestines will recede from the pelvis and allow a perfect view of the pelvic viscera, when bleeding spots and abraded tissue may be picked up by forceps and drawn near enough for treatment, and sometimes operations upon the

rectum, cecum and the sacrouterine ligaments may be performed.

Among the advantages to the patient of the small incision, in properly selected cases, are less postoperative discomfort, less morbidity, less mortality and stronger abdominal parieties.

I wish to say that I am not advocating the small incision for cases in which the work cannot be done at the surface, but am insisting on the fact that in many cases the work, after the separation of adhesions, can be completed at or near the surface. If that is true the question to be determined in the individual case is whether or not it is safe to separate the adhesions without seeing them, and whether we can determine through the small incision that we are leaving the parts in a favorable condition for the best results. It becomes a question of experience.

In preparing a nullipar with muscular or contracted abdominal walls and considerable fat for a difficult operation through the lower abdominal incision, it is well to remove carbohydrates almost entirely from her diet for a week or ten days until a day or two before the operation, for the purpose of causing absorption of some of the fat, and also to keep her in bed for two or three days for the purpose of relaxing the muscles. In order to get rid of intestinal gas several good bowel movements should be procured the afternoon or evening before an a. m. operation, or the morning before a p. m. operation, and only fluid nourishment, and but little of that, be given subsequently. These drastic measures are, of course, not recommended for thin patients whose abdominal walls have been stretched by pregnancies or by a large tumor present at the time. Such patients may need almost no preparation.

In closing, I wish again to emphasize the fact that I am not advocating a short incision as the best one in general, but am only protesting against the indiscriminate employment of the long incision in cases in which, by a careful and intelligent technic, the short one can be made to suffice for the work that is to be done. There is sometimes a temptation to operate through a large incision for the benefit of the surgeon who wishes to do a brilliant operation in record time, and who forgets that the amount of traumatism and shock may be greater in a quick, brilliant operation than in a deliberate and careful, but somewhat slower one.

## DISCUSSION

Dr. Collins has used the transverse incision in removing gall bladders lately, after the suggestion of Moschovics and he was glad to hear the essayist speak about gauze. Canton flannel can be secured with a nap on both sides, and that is much better.

Dr. Aime Paul Heineck thinks it is injudicious to emaciate patients to get better relaxation of the abdominal wall; the most desirable relaxation can be obtained by a competent anesthetist.

As far as the incision is concerned, must be adapted to the individual case. With careful diagnosis we can make short incisions, incisions adapted to the individual case and incisions that reduce to the minimum the possibility of a post-operative hernia.

He was much pleased with the words of commendation of Dr. Collins in regard to the gridiron incision, especially in cases of complicated appendicitis, provided that incision is made with no division of muscular fibers, no division of nerve fibers.

In the female, in case of doubt as to whether we are dealing with a case of appendicitis or a case of uninterrupted pregnancy, there is a case for median incision, though for appendicitis the median incision is never an incision of election.

We will have much more successful operations by making our diagnosis before we operate and by having competent, expert anesthetists.

Dr. Byford (closing): I have never employed the transverse incision very much for I don't regard it as simple as the other, particularly in making a small incision. The small incision in the median line goes through the skin, the fascia and the peritoneum. The muscle is separated with the blunt ends of the knife and there is less cutting.

With regard to limiting carbohydrates, it is not to relax the abdominal wall, it is to remove some of that fat from the inside of the abdominal cavity. Some patients seem too full of intestines, they have short abdominal walls and fat in addition. If the operation is not a serious one it doesn't matter so much if a patient is slightly under nourished, better an undernourished patient than a plethoric patient.

## DIABETES: THE INITIAL FAST AND TOLERANCE TESTING.\*

EVERETT J. BROWN, M. D.

DECATUR, ILLINOIS.

The last three years have given us some most interesting developments in our conception and management of this most serious, but always interesting disease. In May of last year, before the Association of American Physicians in Washington, Dr. Frederick M. Allen presented a report of

his work on prolonged fasting in diabetes. This paper created a profound impression, and most of the large hospitals in the country began at once to treat patients according to these new ideas. On November 7, it was my privilege to hear Dr. Allen present a second paper before the New York Academy on "Fat Metabolism in Diabetes." In Boston, Dr. Elliot P. Joslin, assistant professor of Medicine in Harvard, took up the Allen treatment and applied it to his very large diabetic clinic in the Deaconess Hospital, and I spent a number of days with him in his diabetic classes, in which he lectures both to his patients and to the special students of this disease; these classes are similar to the tuberculosis classes as seen in various sanatoria for that disease, and it was quite remarkable to hear patients—even 12-year-old boys and girls talking of their diet in terms of carbohydrates and calories.

The literature on the treatment of diabetes has been re-written in these three years, and this has been the result, not of any epoch-making discoveries, but through the patient, scientific experimentation of a few investigators in both laboratory and clinic. The treatment of diabetes has always been unsatisfactory; all drugs were found useless in this disease, and the old restriction of starches and sugars proved so often to be disastrous to the patient, that many physicians refused to treat the disease and advised their patients to eat and be happy.

Allen has proven that a few days starvation will put a diabetic patient in a better and safer condition than weeks of the old starch and sugar restriction; he has also shown that a careful testing of the protein and fat tolerance is just as necessary as that for the carbohydrates, and especially has he shown that an excess of fat is one of the greatest dangers in the diet of the diabetic, and the most frequent cause of acidosis, coma and death. Allen and his followers, by their studies and experiments in food metabolism, have proven the fallacy of the oatmeal cure, the potato cure or any other one carbohydrate cure; also the absurd fallacy of gluten bread for diabetics; they have shown us that a patient with diabetic coma need not always die, but especially have they shown that coma is often an accident due to some preventable cause, and that it can be postponed for months or years or even entirely escaped by the diabetic patient. They have also taught us the drugless treatment of diabetes.

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 9, 1917.



The work of these investigators during the last three years has proven quite conclusively that the pancreas is the chief, if not the only guilty organ in the etiology of diabetes; the most generally accepted theory is that the disease results from deficiency of the internal secretion of the pancreas; it is a weakness of the pancreatic function. At first there is a weakened function of carbohydrate metabolism and next there is a weakened function of the protein metabolism, and then in severe cases an imperfect metabolism of fat. Allen suggests that physicians should not look upon diabetes as a disease, but as an over-worked organ with reduced efficiency; this renders the treatment much simpler. He produced every grade of diabetes in dogs, by removing various amounts of the pancreas with the preservation of the pancreatic duct, and was able to produce a mild or severe diabetes in exact imitation of human diabetes.

Modern medicine has reached a point where it is becoming necessary for physicians to understand, at least, the fundamental principles of food values, food metabolism in the body and its application to the treatment of many diseases, such as diabetes, nephritis, many skin diseases, especially psoriasis, eczema and the various urticarias.

In order to treat diabetes a physician must learn to think and talk in grams and calories to a certain extent. He must remember that a calorie is the amount of heat necessary to raise the temperature of one kilogram of water 1 degree centigrade, or one pound of water 2.2 degrees F. The heat liberated in the body when we consume one gram (15 grs.) of carbohydrate is equal to 4 calories; 1 gram of protein, 4 calories; and 1 gram of fat, 9 calories. The average man weighing 154 lbs., or 70 kilograms when at moderate work requires a diet producing 2,800 calories daily—consisting of 400 grams of carbohydrate, 100 grams of protein and 100 grams of fat. Hence, the diet of the average big men and heavy eater represents 3,000 to 5,000 calories, while some of the heavy eaters in a northern lumber camp were found to be eating a diet producing 9,000 calories. Thus it will be seen that to reduce a regularly eating diabetic from 400 grams of carbohydrates daily to 15 to 100 grams daily is a great sacrifice, and then to continue him on only 100 to 150 grams probably for the rest of his life is a problem for both the patient and his

physician. We know that in diabetes the carbohydrates are not utilized, but escape with the urine as sugar. One patient of mine who was eating a full diet at the time he was first examined was passing 8 pints of urine with a specific gravity of 1.034; six per cent. sugar was found which showed that he was eliminating in his urine 8 ounces of sugar daily.

The average man eats 400 grams of carbohydrates daily; the severe case of diabetes will often not be able to consume more than 10 grams per day, while the mild case will take 150 grams daily without showing glycosuria; the object of tolerance-testing is to get the patient to take his maximum of carbohydrates without sugar appearing in his urine; practically it has been found that we can rarely exceed 100 to 150 grams daily.

In the graduated diet lists consisting of 68 tables prepared by Miss Eckman, dietitian, at the Massachusetts General Hospital, the largest amount of carbohydrates for 24 hours is only 61 grams, and the average is 42, and this is supposed to be the permanent diet for the patient whose tolerance has been carefully tested after the initial fast. An intelligent patient who has been taught to test his own urine daily can easily increase or decrease the carbohydrates and keep his urine sugar free. The physician must decide whether the patient should be advanced rapidly or cautiously in the food tables, and when the stage of constant level is reached he is discharged.

The Allen treatment consists of

First: A starvation or fasting period of from one to six days as necessary to render the urine sugar free.

Second: Gradual specialized increase in food so as to determine the carbohydrate tolerance, the protein tolerance and fat tolerance. Our older methods considered usually only the carbohydrate tolerance.

Third: Continuance of the balanced diet which insures a sugar-free urine.

Before beginning the treatment of an ordinary case a full mixed diet is given, the urine is collected for 24 hours, and the amount of sugar excreted daily is determined. The fasting is then begun and the patient must fast until the urine is sugar-free; he may drink freely of water, tea, coffee and bouillon as desired. Allen originally recommended big doses of whiskey during the fast, as whiskey prevents acidosis, but the

whiskey is now usually omitted and clear meat broth or bouillon substituted; this fast may require only 2 or 3 meals, or as many as 5 to 7 days to render the urine sugar free; the patient is now given 5 ounces (150 grams) of 5 per cent. vegetables, which equals 7.5 grams of carbohydrates; this is increased 5 grams daily up to 20 grams, and then 5 grams every other day passing upward through the 5, 10 and 15 per cent. vegetables and the 5 and 10 per cent. fruits, potato, oatmeal and bread, unless sugar appears or the tolerance reaches 3 grams carbohydrate per kilogram body weight. All the old methods of treatment restricted only starches and sugars, allowing the patient to consume fat and protein *ad libitum*. The Allen method has taught us that the determination of the protein and fat tolerance is just as necessary as the determination of the carbohydrate tolerance; in fact, many patients were killed by the sudden withdrawal of carbohydrates with an increase of proteins and fats which produced at once a fatal acidosis and coma, for we know now that fat is the dangerous element in the diet which causes the acidosis. Therefore, when the urine has been sugar-free for 2 days on the vegetable diet, we add 20 grams of protein (3 eggs) and thereafter 15 grams daily in the form of meat until the patient is receiving one gram protein per kilogram of body weight; at the same time a small quantity of fat is gradually added until 4 grams per kilogram is given.

Never before has the importance of the regulation of fat in the diabetic patient been recognized as it is with this treatment; it has shown that fat unbalanced by other constituents is a poison, and that it is necessary to preserve a natural bond between fats on the one hand and the proteins and carbohydrates on the other, if dangerous complications are to be avoided, especially acidosis and coma. Formerly many diabetics were killed by having their starches and sugars eliminated while they were given an excess of meats and fats, the latter causing a rapid lipemia and acidosis and quick death. We know now that it is not the fat alone, not protein alone, and not carbohydrates alone, which is the source of the danger, but that it is a disturbed balance between all three combined, with an over-taxing of the patient's assimilative powers which leads to the downward progress of diabetics under the usual plan of dietetic regulation. If he has acidosis he should be fasted once or repeatedly until

his assimilative functions are restored and his diet should be kept within his assimilative capacity; in this way a majority of patients will live in comfort and a large proportion will ultimately show a decided increase in the extent of their assimilative capacity.

Formerly we deplored and tried to prevent a loss of weight in our diabetics. Allen points out that loss in weight occurring during fasting should not be corrected; the patient is to be allowed to remain below his previous weight, even becoming fairly thin. Any attempt to increase the weight results in a return to the diabetic condition.

The Allen treatment has already prolonged the lives of thousands of diabetics; coma is delayed months or years; the various infections such as carbuncles, abscesses, dermatitis and gangrene are prevented or cured and even in the severe cases, are at least postponed. The treatment is simple and within the reach of every patient if his physician is a good teacher and arouses his enthusiasm and help; at one stroke he is delivered from all kinds of medicines, patent and otherwise, quack methods of treatment, gluten and other diabetic breads, and is taught how to live with his disease a long while and to enjoy life.

With the newer treatment of diabetes our ideas in regard to diabetic coma have considerably changed. Formerly coma was regarded as an inevitable terminal stage in the large majority of cases. Now we know that coma can often be prevented or postponed for months or even years, and that it is usually an *accident* brought on by some sudden change in diet, by some acute infection, or by some physical or mental strain; a most common cause of coma is an abrupt change to a protein-fat diet, with the elimination of carbohydrates. There are certain symptoms which, with careful observers, announce an impending coma; a loss of appetite, nausea or vomiting, an unusual fatigue, tinnitus aurium, drowsiness or the characteristic deep breathing of diabetic dyspnea. There is no danger of coma with an alkaline urine and a negative ferric-chlorid test for acidosis. In all severe cases of diabetes the physician should be in close touch with the patient, for an unstable equilibrium exists and a trifle may upset, and indigestion, worry, excitement, or a mild intercurrent disease may precipitate coma. For this reason a sudden change



of diet and régime in long chronic cases is dangerous. For this reason many practitioners for years have opposed any diet regulations, especially in old persons, and have allowed their diabetics to eat anything, for they have observed the great weakness, the rapid loss of flesh and the intercurrent complications which attended the old method of strict carbohydrate restriction, and have noticed the great improvement in their patients when all their diet lists were thrown away. Many diabetics themselves, after months of dieting, have also discovered this and have found improved health and well being after discharging both physician and diet regulations.

The routine use of gluten bread or gluten flour as food for diabetics is wrong, for most all gluten and diabetic flours are gross frauds and contain from 50 to 60 per cent. of starches and are a source of danger to diabetics. Flour, however, made from soybean or almond or washed gluten flour is nearly free from carbohydrate, but washed gluten is objectionable on account of the large quantity of protein in a small bulk. Bran is being used more and more for diabetic patients; it is really only cellulose and is supposed to have no effect upon the metabolism; but it is not very palatable unless the fat of bacon or butter is mixed with it.

Allen has classified diabetes so that those cases having a carbohydrate tolerance of only 10 grams or less are "severe cases"; those having a tolerance of 50 to 100 grams are mild cases. It is rarely desirable to give any diabetic more than 150 grams of carbohydrates daily, while the average healthy man will take 400 grams daily.

An emphatic note of warning is necessary in the management of diabetes by the later methods, first it must be remembered that over 90 per cent. of the cases of diabetes are treated by the general practitioner, and only a small portion ever reach the specialist or the hospital in the larger cities, for diabetics are not bed patients, unless they are about ready to die, and it is a very difficult proposition to put them to bed for observation and treatment, hence it is the general practitioner who treats most cases. For practical purposes the more technical methods of investigation, such as the estimation of the carbon-dioxide tension in the expired air, the sugar content of the blood, and the other more complicated tests for acidosis are not necessary. Most satisfactory results can be obtained by the ordinary sugar tests and the

tests for acetone and diacetic acid together with the measure of the daily amount of urine; then by gradual tolerance testing the average practitioner who will take the necessary pains with his patients will be able to render him permanently sugar free.

But old patients and very young children do not stand starvation well and there are a number of rebellious diabetics who cannot be treated at all. The physician, to succeed, must be enthusiastic, painstaking and optimistic; he must educate his patient even at the risk of making him a more self-centered and neurasthenic patient. A normal person, if starved, will develop acidosis, and patients with tuberculosis, cardiovascular disease and exophthalmic goiter and very obese patients do not do well with severe fasting; hence it is unwise to starve all patients as a routine, except with a careful preliminary period of observation and tests. In these cases especially, it is better to follow Joslin's advice to first reduce the fats before the reduction of carbohydrates to any great extent.

A good prognosis occurs in cases with obesity, a favorable heredity, an early diagnosis or the history of a benign diabetes of several years duration with a gain in tolerance and not much loss of weight. Hereditary cases seem to have a better prognosis. In children who have lived a long while with the disease, a family history of diabetes often exists; one child of seven years lived nine years; another with an onset at 13 years, lived 12 years; and a youth of 17 whose mother, brother and sister had diabetes, lived 20 years, and finally died in coma. But the medical literature is reporting an increasing number of cases of cured or long arrested diabetes in children. Smitz's famous case of a four-year-old girl who had from 2 to 5 per cent. sugar for two months, is yet living at the age of 48, is married and has a large family. Personally, I have never seen a child recover from diabetes or to live longer than three years with the disease, but with the reports of occasional recoveries in the literature, we are not justified in regarding every case as hopeless.

Carbuncles, skin eruptions, abscesses and various infections disappear more rapidly than by any other method of treatment. Joslin reports a case of pregnancy with 6 per cent. sugar which was carried successfully to term and delivered by Cesarean section with recovery of mother and child. Almost any operation can be done in

moderately severe cases if the Allen treatment is first instituted. No surgeon should operate upon a diabetic patient who is not sugar-free and acidosis free by preliminary starvation treatment and gradual tolerance testing to a point of good nutrition. It is still true that when a diabetic, old or young, goes into coma, he rarely comes out of it; but as recovery occasionally occurs, there is no excuse for the physician standing idly by with folded hands.

A patient threatened with diabetic coma as shown by restlessness, deep painful respiration, nausea, vomiting, unusual fatigue, excitement, vertigo, tinnitus and general discomfort should, if possible, be placed in a hospital where rectal drip and intravenous alkaline solutions can be used; the treatment must be prompt; warmth to body, epsom salts, fasting—only water being given; avoid ice water, as patient over drinks and upsets his stomach. Normal salt—alkalies—3 per cent. soda bicarbonate, etc., whiskey and digitalis. There is no danger of coma if the urine is alkaline and sugar free. The most common cause of coma is a sudden change to a protein-fat diet with elimination of carbohydrates. Williams prevented a threatened coma by giving whiskey and honey.

A word more of caution is needed in considering this new method of treatment; it is dangerous to suddenly starve old people and the very severe long-standing cases with such complications as abscesses, gangrene and the various infections; in these cases the most important thing is to omit fat first, at this is the food element which produces acidosis; after two days omit protein and give one-half the carbohydrate daily until reduced to 10 grams, then fast until sugar free. Many old people have been thrown into coma by sudden withdrawal of carbohydrates. The weekly fast day is another important routine used in the Allen treatment if the best results are to be obtained. Whenever the tolerance is less than 20 grams of carbohydrate, a one-day fast should be practiced each week. If the tolerance is between 20 and 50 grams, upon the weekly fast day, the 5 per cent. vegetables should be used. In old people fasting may not be necessary at all; simply reducing the carbohydrates from 400 grams daily, which we all take, to 100 grams may render the patient sugar free. Mild cases in old people may only require the omission of butter and cream.

The recent work of Warthin and Wilson has stimulated the interest in the question of the coincidence of latent syphilis and diabetes, and still more important is the possible rôle of a local focus of infection as a cause of diabetes.

In 76 cases of diabetes under my care, a diagnosis of syphilis was made in five, and in all of these 5 cases the Wassermann test was positive. One case, a banker aged 55 years had had diabetes of a moderate type for four months; he had lost much weight and was unable to work; his blood gave a positive Wassermann, but without any history of clinical syphilis; in looking for a possible local focus, the teeth and gums showed a more than usual gingivitis and a general pyorrhea; without any attempt at fasting or dieting, all his teeth were removed and after ten days of rest in bed his urine became sugar free, and now, after six months, there is no evidence of diabetes and he has recovered his normal weight and strength and eats all foods.

It is very difficult to control many diabetic patients, especially after a few weeks; they will do as they please after they get beyond the observation of the doctor as we have all experienced. Like morphin addicts, they will lie and even steal in order to obtain their coveted bread or sugar; I remember a man in Cook County Hospital who would slip out of bed every night and steal a loaf of bread from the kitchen to eat under the bed covers. Joslin in Boston overcomes this tendency by class instruction every week to all his patients, the same as the tuberculosis classes; the patients figure their own food values, prepare their own food at home, and make daily tests of their urine. One little fellow of twelve years of age proudly told me that he tested his own urine every day for sugar by placing the test tube containing Benedict's solution and a few drops of urine in his mother's boiling tea kettle. On this particular day he had increased his carbohydrates to 40 grams, and his calories to 1,600 for that day. The patients are all enthusiastic and are urged to ask questions and to keep their own daily charts, and they vie with each other in keeping their urine sugar free and acid free.

Allen does not claim a "cure" for diabetes, but he "attempts to do the same things that the rational treatment has attempted previously, but to



do that more quickly, more accurately, and more thoroughly," and he says he has a future vision of a diabetes in which there is no glycosuria, no acidosis, no use for alkalies or other drugs, no complications, no downward progress, no coma, no death. If these hopeful visions prove impossible, we can, at least, show that even now the sum total of years of life added to these sufferers is enormous.

#### DISCUSSION.

Dr. Gordon G. Burdick, Chicago, thought the most unfortunate thing connected with diabetes is the fact that the profession calls it diabetes. Very many cases of diabetes will be rendered sugar-free by diet alone when there is not much pancreatic insufficiency.

An excess nitrogen diet is much more dangerous than an excess carbohydrate diet, because the acidosis in the majority of cases comes from the mineral acids due to metabolism of nitrogen.

He criticised the common practice of reducing the per cent. of sugar in three or four days from 5 to 6 per cent. to one or one and a half per cent by simply drenching the patient with water. This relieves them clinically, but they are secreting more sugar.

He finds it is fundamental to calculate the amount of water needed for the patient's metabolism, and that in four or five days the excessive hunger and thirst will begin to leave as soon as a proper balance is brought about.

Had used the Allan system sometimes in patients who have been eating enough for four or five normal individuals, secreting as much sometimes as a pound of sugar in twenty-four hours. He considers the estimation of the amount of sugar secreted in each twenty-four hours essential, but the percentage of sugar is simply misleading.

He allows patients just as much carbohydrate as they can stand. As a general rule, he finds it seldom necessary to cut a patient's diet below four ounces of carbohydrates a day. An excess of nitrogen diet must be balanced either with artificial alkali medication or by sufficient vegetable intake to balance the acidity that will come about.

Dr. Munson noted the importance of classification in regard to these cases because so many of them are mild in character. In one mild case the urine had been examined at least two or three times a week for a period of six months and found free from sugar. At last a sample contained sugar due to eating more fudge for several days. Since that time, with the ordinary precaution of not using sugar and meat the same day, and not using any sugar in any of his dishes or coffee, no sugar has re-occurred.

Another severe case of eleven years' duration, even with entirely restricted carbohydrate diet, continued to have sugar, but under the Allan treatment she became sugar-free in five days. She measures her urine each day, examines it for sugar, and has a table so

that she can arrange the figures; she understands the calorie values, has her percentage of vegetable, the percentage of starches arranged from three per cent. up to about a fifteen per cent. vegetable, and each day makes her own examination.

She had gone down to a hundred and eighteen pounds, but is now up again to her normal hundred and forty pounds.

He advocates the importance of teaching of children to eat a general diet, and particularly a vegetable diet.

Dr. Taylor inquired of Dr. Brown as to his management of diabetes complicated with albuminuria, especially as to diet.

He related an example of the fasting-day treatment advocated by von Newartson sometime before the Allan treatment became known; that is, taking one day of almost absolute fasting out of each week.

One patient who lost both legs from gangrene while under this treatment is now going about on wooden legs in better health than he has been for eight or ten years, he has learned to carry out the absolute fasting day for one day out of the week, with a re-appearance of sugar possibly once or twice in the year.

Dr. Taylor thought the ordinary diet card issued for the purpose of giving the diabetic patient, with the understanding or implied understanding that he can go out and eat what he pleases, puts that patient under absolutely no treatment whatever and does a great deal more harm than good, because he goes along with the security that if he sticks to that diet he is going to get well.

He believes in the one or two-day starvation plan, in order to eliminate from the system the products that will bring on possible acidosis and to impress on the patient that it is done for the express purpose or one of the express purposes of giving him the opportunity of eating more carbohydrates and thus balancing the diet.

Dr. Brown (closing discussion): In answer to Dr. Taylor's question in regard to the presence of albumin and the suggestion of sugar in the urine—it is true that after middle life practically all diabetics have albumin in the urine and I really pay no attention to it. But in a younger person it should really have treatment. Care should be taken not to overdo the feeding of albumin; so frankly I pay no attention to the albumin in the urine.

In regard to the fast question also, I have one patient who has absolutely discarded the doctor's treatment, but when he begins to feel "dopey," as he says, he fasts for one day and he is all right then for three or four weeks, when he has another "dopey" feeling and he will fast again. I say that a smart diabetic can pass almost any life insurance examiner; it is done right along.

I have had some of my patients go to other towns and pass life insurance examinations because it is a very simple matter for men of average intelligence to make their urine sugar-free.

## SPLENECTOMY FOR HEMOLYTIC ICTERUS.\*

CHARLES A. ELLIOTT, M. D.,

CHICAGO.

It seems desirable at the present time to consider the evidence in favor of splenectomy as a cure for hemolytic icterus. This seems especially desirable because splenectomy in the treatment of pernicious anemia has been advocated and performed in many cases but is apparently losing ground.

In 1915 we collected from the literature 48 cases of splenectomy for hemolytic icterus. Since then there have come to our knowledge 17 cases. Most of these have been or are about to be published. They include twelve cases operated on in the Mayo Clinic and studied by Dr. H. Z. Giffin, three by Dr. Charles H. Peck of New York, one by Goldschmidt, Pepper and Pearce of the University of Pennsylvania, and one additional case of our own. Of the 65 cases collected, 18 have been reported by American authors. These are of special value for consideration at this time since they have been observed under such conditions as pertain here and are more readily checked up. No doubt there have been other cases operated upon in America, which have not been published. Most of the cases successfully operated on have undoubtedly been reported, but cases in which an operative death occurred or in which no improvement resulted may not have been published.

Of the 18 American cases there have been three deaths, two immediately after operation, both of the congenital type, and one after four months of the acquired type. The other 15 cases are still living as far as can be judged. It is noteworthy that the deaths resulted soon after operation, while those that survived showed no ill effects as the result of splenectomy. Of the 18 reported cases one was operated on in 1911, one in 1912, 1913, 1914, nine in 1915, five in 1916. While the time since operation is far too short to judge of the ultimate results of splenectomy, the effects of the operation are so promptly manifested that at least a fair conclusion may be drawn at the present time. Of these ten were males and eight females; the ages varied from 5½ to 54 years. There were 13 of the congenital type and five of the acquired type of hemolytic icterus.

The most striking result of the operation is the improvement in the general condition of the patient noted in most of the cases which survived operation. This is very definite and lasting in comparison with the effect of splenectomy for pernicious anemia, in which the results are indefinite and not lasting. Thirteen out of the 15 who survived operation were considered cured. At least two cases had hemolytic crises following operation, but the exact nature of these crises is not stated, i. e., whether choloria or acholoria, and both ultimately recovered and were considered cured.

It is noteworthy that there was an improvement in the blood picture in 12 of the 15 cases, and in the other three there was no opportunity for post-operative study. In none of the cases operated on was there the high grade of anemia seen in the most severe cases hitherto reported, and no marked change in the blood was to be expected.

The fragility of the red blood cells was not, upon the whole, markedly affected and about the same figures were obtained, following the operation as before, although in one case (Peck) there was a decided drop from 0.72-0.27 before the operation to 0.48-0.35 three years after.

In nine cases jaundice is definitely stated to have disappeared promptly after the operation, but in at least three cases the patients were stated to be still jaundiced. This was true in one of our own cases, 18 months following operation, at which time the subconjunctival tissues were markedly yellow, although there was no bile pigment demonstrable in either the blood serum or urine and the duodenal content which before the operation was a dark brown (chocolate) color, now appeared a thin light yellow liquid. The urine at this time showed no excessive urobilin. The yellow discoloration of the tissues in the absence of choloria and cholemia was interpreted by us as being due to the vital staining of the tissues resulting from the 54 years of continued jaundice.

Of the 18 cases, nine were found to have gall stones. The finding of gall stones in hemolytic icterus is very frequently observed, probably due to the excessive partition of the hemoglobin molecule and the deposit of the pigment from the over-saturated bile. The question of the treatment of gall stones found in cases of hemolytic

\*Read before the Sixty-seventh Annual Meeting of the Illinois State Medical Society, Bloomington, May 9, 1917.



icterus is still an open one, but it seems best, in our opinion, that this operation should be deferred until after the splenectomy. An operative death occurred in one of our patients, whose gall bladder was drained at the same time that the splenectomy was performed. Such a procedure now appears to be an unnecessary risk, especially because gall stones may be particularly difficult to deal with in this class of cases, and their removal adds materially to the risk of the splenectomy.

In at least two cases operations upon the gall bladder have been performed and no pathological lesion found in that region. This is manifestly due to an error in diagnosis, the hemolytic factor being overlooked. The frequency of the association of hemolytic icterus and gall stones, both of them producing jaundice, although of different types, tends toward confusion, and great care must be taken in making a proper diagnosis. No doubt many of the cases of hemolytic icterus demand operative interference on account of the presence of gall stones, but the role of the hemolytic factor in the production of jaundice should not be overlooked, otherwise disappointment is certain to follow.

The following conclusions may be drawn:

1. Splenectomy is a cure for hemolytic icterus.
2. There is a mortality of about 16 per cent attending splenectomy for hemolytic icterus.
3. Only severe cases in which the continued hemolysis interferes with the well being of the patient should be subjected to the operation.
4. Gall stones should be dealt with at a subsequent operation, not at the time of splenectomy.

#### DISCUSSION

Dr. Munson: I'd like to ask Dr. Elliott in these cases of hemolytic jaundice is bile generally present in the stools? And also a description of the blood picture from typical cases.

Dr. Elliott: As far as the bile in the stools is concerned, the bilerubin, urbilin and urobilinogen that are found in great excess in these patients are produced by the breaking up of the hemoglobin molecule, and are then secreted by the liver. Pile pigment is probably an excretory product of liver action.

Under normal conditions there is a great amount of bilirubin excreted, bilirubin apparently being the

end product of hemoglobin activity. But under abnormal conditions the hemoglobin molecule is probably split other ways into urobilin and urobilinogen; it is thrown into the duodenum and the intestinal tract so that there is bile in the stools. What is more, there is a great quantity of bile pigment excreted because the hemoglobin is being very rapidly destroyed. It has been estimated in some of these cases, that as much as half and in some of them two-thirds of the total amount of blood has been destroyed during a single crisis lasting a day or so.

Therefore, bile is found in the stools—urobilin and urobilinogen is found in great quantities.

As far as the blood picture is concerned, you can see that there are great variations—the blood picture depends upon the ability of the hematopoietic system to produce red cells and if the hematopoietic system becomes exhausted the picture of pernicious anemia develops.

### THE TONSIL AS A PORTAL OF ENTRY IN TUBERCULOSIS OF THE CERVICAL GLANDS.\*

WALTER B. METCALF, M. D.,

CHICAGO.

The ensemble of lymphoid tissue, the palatine, lingual and pharyngeal tonsils at the entrance of the respiratory and digestive passages, forms an almost complete ring, commonly known as Waldeyer's ring.

The palatine tonsil, the only one considered in this discussion, consists of a round mass of lymphoid tissue, on each side of the fauces. The tonsil varies markedly in size, but in the young adult averages about 20 mm. in height, 15 mm. in width and 12 mm. in thickness. The lateral surface is covered by the capsule which is continuous with the pharyngeal aponeurosis. The pharyngeal surface is covered with the mucous membrane of the pharynx and presents the openings of various crypts, twelve to fifteen in number and lined with stratified epithelium.

The lymphatics of the tonsils are not well understood. Henkle, in a recent rather remarkable series of experiments, tried to prove that the tonsils were concerned in draining the mucous membrane of the nose and mouth, thus substantiating the findings of V. Lenart, Frankel, and Wright. But Karl Amerbach has still more recently reported the results of his own experiments, carried out in nearly the same manner

#### REFERENCES TO REPORTED CASES

- Griffin, H. Z.; *Surg. Gyn. & Obst.*, 1917, July or Aug. (To be published.)  
 Peck, C. H.; *J. A. M. A.*, 1916, LXVII, 788-790.  
 Goldschmidt, Pepper & Pearce; *Arch. Int. Med.*, 1915, XVI, 437-455.  
 Elliott & Kanavel; *Surg. Gyn. & Obst.*, 1915, XXI, 21-37.  
 Friedman & Katz; *J. A. M. A.*, 1916, LXVII, 1295-1298.  
 Russell, J. I.; *Ann. Surg.*, 1916, LXIV, 627.

\*Read before the Chicago Medical Society, March 14, 1917.

as Henkle's, except as G. B. Wood remarks, that he was more careful in the method of injection. In his experiments on human beings he injected carbon pigment into the mucosa of the nose and mouth and was, in no instance, able to recover any part of them in the tonsils. In his experiments on dogs he showed that these particles traveled down to the submaxillary glands, hence along a route anatomically demonstrated by our foremost anatomists.

G. B. Wood's contention is thus upheld that as far as we know there are no afferent lymph vessels running to the parenchyma of the tonsil, neither have any perilymphatic spaces been demonstrated. The efferent vessels empty into the superior deep cervical glands, especially the so-called tonsillar gland, lying under the anterior border of the sterno-cleido-mastoid muscle, just behind the angle of the mandible. This gland was first pointed out by G. B. Wood and designated by him, the tonsillar lymphatic gland.

The lymph from the lateral walls of the pharynx, especially from the tonsillar region, is taken care of by the mesial group of the deep cervical glands.

The function of the tonsils, as that of the Waldeyer's ring in general, is from their important anatomical positions, to be considered as one of the direct defenses against microbic invasion. Absorption through the intact tonsillar epithelium is a disputed question.

According to some investigations the tonsils per se actually antagonize the entrance to their interior of infectious germs. But if they are once absorbed the anatomical structure of the gland will delay their passage, thus giving the ever present leucocytes a chance to exercise their phagocytic power. Another protective function of the tonsil is possibly shown by the so-called Stöhr's phenomenon; the tonsils are traversed by an enormous number of leucocytes which exercise a kind of migration toward the oral cavity. Some investigators believe that the tonsils have an internal secretion but exact proof is, as yet, wanting.

It is clearly evident that the tonsils and the lymphatic system occupy a very important position in defending the organism against infection. This protective action is brought about, first, because of their direct connection, second, as a result of the bactericidal function of the lymphatics.

The situation of the tonsil is such that any bacilli entering the mouth and being swallowed pass over its surface and may gain entrance to the crypts. The tonsillar ring of Waldeyer's, as a whole, undoubtedly plays an important role as a first line of defense against infection, and whatever it cannot handle is propelled along the lymph stream to the next line, the lymph glands, where they produce the characteristic changes.

The opinion that only the hypertrophied tonsil can be the source of infection seems scarcely reasonable, in view of the fact that repeated inflammatory attacks of the tonsils often leave them sclerosed and atrophic and hence less able to deal with micro-organisms than when they are of normal sizes. The small sclerosed tonsil may increase the facility of infection because of its crypts having wider openings on the buccal surface than normal, also because of atrophy of the lymphoid tissue.

The question of the portal of entry for the tubercle bacilli has received very marked attention during recent years. This investigation has been directed along the lines of determining the modes of infection as they have a direct bearing upon the points of entrance of the bacilli. That the palatine tonsil plays an important part in this role, there can be no question. Its importance has increased as a result of this investigation and we find that the tonsil today occupies a position in medicine and surgery of more importance even than the appendix. The role played by the tonsils in endocardial and rheumatic infections has been well established.

It is my opinion that the tonsils in children are second only to the necrotic teeth as open portals for the entry of pyogenic bacteria. The frequency with which tubercle bacilli are found in the tonsils, associated with enlarged cervical glands, a large per cent of which have been proven to be tuberculous, points to the intimate relations between the tonsils and the cervical glands. We have already shown the anatomical connection between the tonsil and the cervical glands and in further support of our contention that the tonsils drain into the cervical glands and are thus portals of entry for the tubercle bacilli and are directly responsible for a large percentage of the tuberculous cervical infections, we will review some of the results obtained by different investigators.

Grober<sup>1</sup>, as a result of his researches, believes



that the tonsillar lymphatics are connected with the pleuræ and apices of the lungs and that tuberculous infection of the apices occurs by way of the tonsil and cervical and subclavian glands. He injected the tonsils of hogs with India ink and traced particles through the lymph glands to the pleura of the pulmonary apices.

Wood<sup>2</sup> injected a mixture of Berlin blue, turpentine and ether and was able to show that the lymph drains from the tonsils into the upper superficial lymph glands, then into the deep glands of the neck. It was he who first discovered a lymph gland situated just below the posterior belly of the digastic muscle, below and behind the angle of the jaw, and, as already stated, calls it the tonsillar lymph gland. This gland is the first to enlarge when any inflammation of the tonsils occurs and may be first to be involved in tuberculous cervical adenitis.

The epithelium of the tonsils has been shown repeatedly to be penetrable by the tubercle bacilli and without leaving any marks or evidences of such invasion.

Goodale<sup>3</sup> placed carmine particles in the crypts before the removal of the tonsil and demonstrated that these particles pass freely through the epithelium.

J. Wright<sup>4</sup> applied saponified butter fat to the surface of the tonsils and found that particles were absorbed.

Damachowitz<sup>5</sup> found tubercle bacilli in the act of penetrating the mucous membrane of the tonsil.

Wood<sup>3</sup>, in his experiments on hogs, found that tubercle bacilli inoculated on the surface of the tonsil were carried into the gland and that on the fifth day they could be demonstrated in the tonsillar lymph gland. The most significant point of his experiment was that virulent bacilli could be absorbed by the tonsil without injury to the epithelium. This observation is strikingly parallel to that of Ravenel,<sup>7</sup> who fed dogs with tubercle bacilli and killed the animals three and one-half hours later. The chyle was collected from the mesentery lymph glands and injected into guinea pigs. Microscopical sections of the intestinal mucosa showed no lesions and yet all the guinea pigs developed tuberculosis.

Feeding experiments on goats by Calmette and Gerine also showed that tubercle bacilli can pass through the intestinal walls and even through

the mesentery lymph glands without leaving lesions.

Cornet<sup>8</sup> fed animals with large quantities of infectious material and found that the cervical glands became infected by the absorption of tubercle bacilli through the mucous membrane of the tonsils.

Orth<sup>9</sup> fed animals with tuberculous tissue and always found that they developed tuberculosis of the cervical and bronchial glands and later of the mesenteric glands with intestinal lesions.

It is, however, still an open question whether tonsillar and cervical tuberculosis occurs more often as the result of the ingestion of infected food, than from the inspired air. The great frequency with which the bovine type of bacillus is found in children who have tuberculous lymph adenitis must be recognized. This has been shown by finding the bovine type of the bacillus in the tonsils and cervical glands of such children, and would tend to throw light upon the question of the relative frequency of food or air infection.

Theobald Smith<sup>10</sup> isolated three cultures of tubercle bacilli from the tonsils in three cases of cervical adenitis and found them to correspond to the bovine type.

Lewis<sup>11</sup>, in the examination of fifteen consecutive cases of primary tuberculous adenitis, isolated nine cultures of tubercle bacilli of the bovine type and six cultures of the human type, basing his classifications on the adaptability to artificial cultivation, character of growth in glycerine broth, and virulence for rabbits.

In a few instances tubercle bacilli have been demonstrated in the crypts or on the surface of the tonsils. Freedman found bacilli in three cases from smears taken from the surface of the tonsil.

Freudenthal<sup>12</sup>, in the examination of 133 cases with no symptoms in the nose or throat, found tubercle bacilli in 24 cases out of 52 tuberculous patients and in nine out of 81 non-tuberculous, a few of which later developed tuberculosis.

Strassman<sup>13</sup>, in twenty-one autopsies on cases of lung tuberculosis, demonstrated tonsillar tuberculosis in thirteen cases.

Schlinker<sup>14</sup>, at autopsy, found eight cases of bilateral tonsillar involvement and one case of uni-lateral in nine cases of advanced tuberculosis of the lungs. In five children with moderately advanced disease of the lungs, the tonsils were tuberculous in three. From his observations he

concludes that the cervical glands receive their infection from the tonsils.

Walsham<sup>15</sup> in 34 autopsies on patients dead of tuberculosis found the tonsils tuberculous in twenty.

TABLE OF AUTOPSIES

	Number of cases.	T. B. C. Tonsils.
Schlesinger .....	17	13
Ito .....	13	6
Damaschowitz .....	15	15
Kruckmann .....	20	12
Strassman .....	15	13
	102	74

According to these figures the percentage of tonsillar tuberculosis in cases of pulmonary tuberculosis is 72.5 per cent. It is very evident that a large percentage of these were the result of secondary infections.

The percentage given by various authors as to the involvement of tonsils in normal persons or in cases of cervical adenitis vary greatly. We frequently find tubercle bacilli in a large number of tonsils that have been removed without any reference to a cervical gland infection.

Dieulafoy<sup>16</sup>, in April, 1899, first startled the medical world by the results of his experiments. He produced tuberculosis in guinea pigs in eight out of 61 cases, by the introduction of tonsillar fragments. In his adenoid experiments he obtained tuberculosis in seven out of 35 cases:

Wood<sup>17</sup>, of 1,672 tonsils examined histologically or by inoculation, showed tuberculosis in 4.6 per cent.

Lockard<sup>18</sup> collected 1,896 cases and found tonsillar tuberculosis in 5.9 per cent.

TABLE OF HISTOLOGICAL EXAMINATIONS OF TONSILS

	Number of cases.	T. B. C. Tonsils.
Wright .....	51	0
Piffi .....	100	1
Carnie .....	20	4
Pilliet .....	10	3
Lennoyly .....	13	3
Broca .....	100	0
Prindel .....	64	8
Pevider and Fisher.....	31	5
Gottshine .....	53	4
Lockard .....	51	3
	543	31

5.6 per cent

Robertson<sup>19</sup> in 232 tonsils found tubercle bacilli in 8 per cent.

Barnes<sup>20</sup> found three cases of latent tuberculosis in 150 tonsils removed from non-tuberculous patients.

Lewell<sup>21</sup> in 772 cases examined histologically found 3.9 per cent to be tuberculous.

Willis<sup>22</sup> in 213 tonsil examinations found tubercle bacilli in 5 per cent.

In cases of cervical adenitis or of tuberculous adenitis the percentage of tonsillar tuberculosis is much higher.

Kruckman<sup>23</sup> obtained tonsillar tuberculosis in all of his twelve cases of cervical adenitis.

Carmichael<sup>24</sup> found that seven out of 50 cases of chronic cervical adenitis showed tuberculous lesions in the tonsils.

Mitchell<sup>25</sup> found 24 out of 72 similar cases with positive tuberculous tonsils.

Kingsford<sup>26</sup> obtained positive results in seven of seventeen cases of chronic adenitis of the neck.

Willis<sup>27</sup> found tuberculous cervical adenitis present in nine out of ten cases with a diagnosis of tuberculosis of the tonsils.

Hurd and Wright<sup>28</sup> examined eleven cases of clinically diagnosed tuberculous cervical adenitis, eight of which showed tuberculosis of the tonsils.

Aufrecht and Grober<sup>29</sup> consider the tonsils to be one of the most frequent points of entry of tuberculosis, and that tuberculosis of the lungs arises from them.

The feeding experiments of Griffith<sup>30</sup> include a total of 92 animals and give us undoubtedly a true conception of the conditions at hand.

TABULATED ACCOUNT OF GRIFFITH'S EXPERIMENTS

Species of Animals.	No. Fed with T. B. C. Material.	No. of Tonsils T. B. C.	No. of Neck Glands T. B. C.
Chimpanzees .....	7	1	4
Rhesus Monks .....	7	1	4
Baboons .....	14	9	11
Calves .....	21	3	5
Goats .....	9	1	5
Pigs .....	34	8	21
	92	23	50

The tonsils in this series then shows an involvement of 25 per cent, while the neck glands are involved in 54.3 per cent. The conclusions



would then not seem very far from the truth that in cases of cervical tuberculous adenitis the tonsils are responsible for the condition in about 50 per cent of the cases.

From these experiments and from clinical observation there can be no doubt that tonsillar infections are spread to the cervical glands through the lymph channels.

We have here shown that the tonsils are drained by their lymphatics into the cervical glands.

That the tonsils frequently contain tubercle bacilli. We have shown that the tubercle bacilli may penetrate the tonsillar membrane without leaving any mark and we have also shown that in a very large per cent of cases of tuberculous lymph adenitis, the tonsils are also infected.

With the growing belief that a majority of the tuberculous infections take place during early childhood and that the frequency with which adenopathies are observed in childhood and with the direct connection between the tonsils and the lymphatic glands we have conclusive support of our contention that the tonsil is an important portal for entry of the tubercle bacilli into the human organism, if not one of the most important portals of entry.

#### BIBLIOGRAPHY.

1. Grober—Dut. Arch. F. Clin. Med., Lietsig. LXVIII, 1900.
2. Wood—Amer. Jour. of Med. Sc., 1905, 130.
3. Goodale—Arch. Laryng., VII, 90, 1895.
4. J. Wright—Laryngoscope, 1909, 325.
5. Damachowitz—Beitrage Zur. Path. Ant., 1891.
6. Wood—Jour. A. M. A., 1905, 44.
7. Ravenel—Jour. Med. Res., 5, 1903, 460.
8. Cornet—Scrofulosis, 1914, 79.
9. Orth—Virch. Arch., LXVI.
10. Theobald Smith—Jour. Med. Res., 1915, 435.
11. Lewis—Jour. Experimental Med., 1910-1912.
12. Freudenthal—Arch. Laryng., V, 1896.
13. Strassman—Virch. Arch., XCVI, 1884.
14. Schlinker—Virch. Arch., 1893, 134.
15. Walsham—Chan. of Inf. in T. B., 1904.
16. Dieulafoy—Aca. De. Med., April, 1895.
17. Wood—Jour. A. M. A., 1905.
18. Lockard—Tuberculosis of the Nose and Throat.
19. Robertson—Jour. A. M. A., Nov., 1906.
20. Barnes—Tonsil, 1914.
21. Lewell—Jour. A. M. A., Sept, 1911.
22. Willis—Southern Med. Jour., 1914.
23. Kruckman—Virch. Arch., CXXX.
24. Carmichael—Proc. Royal Soc., Nov., 1909.
25. Mitchell—Brit. Med. Jour., July, 1914.
26. Kingsford—Lancet, Jan., 1904.
27. Willis—South. Med. Jour., 1914.
28. Hurd & Wright—Med. Rec., June, 1909.
29. Aufrecht & Grober—Klin. Jahrbuch, 1905, XIV.
30. Griffith—Quoted from Pybus, Loc. Cit.

#### THE STATE HOSPITAL—ITS PURPOSES, LIMITATIONS AND HANDICAPS.\*

W. M. HOTCHKISS, M. D.

JAMESTOWN, N. D.

On the question of insanity and defective delinquency the public, like Caesar's "All Gaul," appears to be divided into three parts. The

first sounds the warning that unless drastic measures are at once instituted for the care of this class, the entire nation is threatened with insanity.

The second division believes that with the present arrangements, in conjunction with applied eugenics and properly safeguarded marriage laws, there is no cause for alarm, but the great third division knows little or nothing of the subject and seems to care less.

Those of the first division undoubtedly take things too seriously. Those who belong to the second division, who are satisfied with present conditions, do not take the matter seriously enough. Neither of the first two divisions appear to be making much headway toward a solution of the issue and, as they are numerically small, it must be with the great third division that the greatest interest be taken and the people who think little, if at all, and who do not seem to interest themselves, must be appealed to, as it is from them that understanding and help will come.

The lack of knowledge on the part of the vast third division, or rather the erroneous ideas that are held by it, is almost unbelievable, for it seems impossible that people in this enlightened age should be satisfied with anything less than the evidence of personal knowledge in matters of this kind. Any statement that reflects on the management of an institution is accepted as a fact, and no effort is made to ascertain whether or not such conditions really exist. I doubt whether one person in 5,000 is personally acquainted with actual conditions as they exist in state institutions. Legislators sit in judgment, on the needs of an institution, who have no more ability to do so than they would have to write the specifications for an airship or a submarine, and are as well qualified to do the one as the other. One must live with conditions as they exist in an institution to have any reasonable conception of its needs.

Analysts have settled long since upon the doctrine that misunderstanding and lack of intelligent knowledge between people individually and nationally lead to no uniformity of action and are not conducive to best results. The acts of the profession, the state and the nation must always rest upon public opinion, and intelligent

\*Read before the Fifth Annual Meeting of Alienists and Neurologists of the U. S., June 23, 1917.

public opinion can have its foundation only in accurate knowledge. The reason that the purpose of the state hospital lacks in exemplification is because of the ignorance of the public, to whom insanity is as much of a mystery as the aurora borealis, and no one is more to blame for this ignorance than the ones who are in direct control of nature's unfortunates.

State institutions have advanced from mere custodial care through the infirmary and asylum stage to the modern hospital standard with its splendid housing and medical equipment, its laboratory facilities, occupational diversion, re-educational and training schools, colonization, classification, and the psychopathic hospital department that allows of voluntary commitments, also the out patient and after care that tends to prevent recurrences, and everything that will facilitate the betterment of those mentally afflicted from a diagnostic, preventive and remedial standpoint. This standard is not exemplified in many institutions, and to obtain such a standard it seemingly must be accomplished in spite of criticism, political interference, professional jealousy and an indifferent public sentiment. At the present time, however, there is evidence of an increasing confidence in the state hospitals and their management, and the time seems propitious for the education of the public along these lines. If the purpose of the state hospital, as outlined above, could be carried out, the community would be safeguarded, the relatives relieved of an immeasurable responsibility, and the patient benefited by treatment rationally applied, both medical and custodial. He would be comfortably elad and housed, well fed, and in a large percentage of cases returned to his home a self-controlled, self-supporting member of the community. He would be, while in the hospital, under the supervision of men of ability trained for such purpose and in every way fitted to give him the chance to return to normal mentality to which he is justly entitled; but, unfortunately, there is a lack of sympathy and a miserable sentiment that seems born of parsimony and a lack of regard for the feelings and rights of others which demands that the well-being, happiness and comfort of a public charge, especially the insane, is always to be lightly considered when the financial end of the matter is broached, so that dollars and cents and ignorance are weighed in the

balance with what justice demands should be granted these unfortunates.

The state is bound in honor and duty to make the very best provision possible for this class, and the more helpless and dependent they are the greater the care that should be provided. This cannot be done when the position of the individual is such that it stigmatizes and disgraces him and is at such variance with all he has been accustomed to have. Men and women insist on accommodations which give them some degree of privacy and bitterly complain when it is not granted them. They are sent to institutions that are so overcrowded that even proper classification is impossible, because of inadequate housing facilities, and anything in the nature of individual privacy is almost unheard of. No state is so poor but that it can afford to properly provide for those who may be committed to its care and provide in a manner which will best promote their welfare in every way. It seems under existing conditions that efforts are being made that will lower the standard of men's self-respect and make those who are unfortunate enough to be compelled to receive aid feel their dependency more keenly. Civilization teaches that true charity consists in cheerful giving, in a way that will be conducive to higher and more ennobling sentiments and give true comfort in better and more enduring provision for the recipient. It should be a source of much gratification to those in whose power it lies to grant such aid that the opportunity is granted them. How can present conditions be changed and what will bring the earliest relief? It is my belief the question is answered in "Educate the Public," principally the great third division. Bring it home to them as a personal proposition. Do they want such provisions for members of their own family?

What reason have they to suppose that they may rest in immunity and that the terrible curse of insanity will not visit a member of their own home? State hospitals are not filled with people who come only from the lower planes of life, but members of families in the best walks of life are prone to such affliction as are those less fortunate financially and socially, and simply because there has been no evidence of previous mental abnormality demonstrated in those who have gone before is no positive assurance that it may not eventually come to them. "The sins



of the father are visited upon the third and fourth generation," and that father might have been theirs and they not aware of the fact until the dread hour arrives. I cannot believe that there is an individual who would begrudge the sum that would be necessary to fully provide everything in the way of equipment and facilities that would be for the comfort, well-being and happiness of these wards, if they could only be sure that what was given was honestly directed to that end. The public are naturally astonished when they are made acquainted with the aggregate expenditures for the care and treatment of the insane and defective delinquent, and it is because of the fact that they only know of the aggregate sums that they feel the drain is so enormous; but if the matter was presented from a per capita standpoint, I believe their ideas would change. For instance, say that a state with a population of 2,000,000 people is asked for an appropriation of \$1,000,000 for a biennial period; it means a per capita tax of twenty-five cents a year, a sum so insignificant that it should not be considered, and should be easily obtained. The public always sees the sums expended only in the aggregate, just as they always see the patient in the maniacal stage, and cannot realize that after treatment the individual is just as cognizant of his surroundings and jealous of his comfort as is any normal person. The patient is the only one who suffers because of the penuriousness and poor judgment on the part of the public as it is only possible to get what you pay for, and the service necessarily lacks what the difference in financial assistance would provide. Someone is to blame for present conditions, and let us put the blame where it belongs and demand that remedies be applied.

The hospital superintendent is as much to blame as anyone, as there is a large percentage of them who are so afraid of losing their jobs that it takes so much of their time building political fences that they have little time to devote to their institution or their patients. There is no greater curse to a state institution than to have as superintendent one who is there because of political affiliation or favoritism. Who are the men who are getting results today, and what states are far in the lead in the care and treatment of the insane? The veteran superintendents in the states where politics does not change

the heads of institutions every time there is a change in political policy.

There are branches of the public service which can be managed by any man who is capable of managing a store or factory. Training in the ordinary walks of life would prepare the ordinary man for that kind of service, but there are other branches of the public service for which no ordinary sort of private activity will prepare anyone. Into this class fall the hospitals for the insane and institutions for the defectives. When positions in such institutions are filled for political reasons, no matter how good the man may be, the state is compelled to educate him at the expense of its wards; about the time he is educated the political wheel turns and a new set of incompetents comes in to learn what has just been taught to the old set. The folly of this is apparent and would seem sufficient to condemn it, and its manifest unfairness to the patients of an institution is little short of criminal. It is to be hoped that this condition may be changed and the state may have the services of men it has trained and cannot expect to get except by training them.

Corporations and large business establishments do not let men who have received training and have become proficient in their duties go so that they may train new men, but offer inducements to get them to stay with them in the service. "Keep your trained men in the state institutions and keep your state institutions out of politics" is good advice to any commonwealth.

To suggest training for public service without any provision for future service is useless. Public service should be divorced from party methods and party obligations to insure an advance in the efficiency and morals of our public servants.

It has been a long-standing charge against the American democratic idea that its officials are not drawn from the best available material of the citizen body. Much of the abuse and mismanagement that have characterized our government, both state and municipal, has been due to the lack of proper standards in the selection of public servants. In the last few years, however, there has been started a campaign against such loose and iniquitous methods which was prompted by a demand for trained expert public administrators, and it is hoped that ultimately this result will be obtained. The idea is not a new one, as certain foreign countries have been employing these meth-

ods for three decades with wonderful success. The New York Institute for Public Service and the recently organized National Institute for Public Service are steps in the right direction. The success of these institutions can be judged by the recent advance in municipal government, due to this method of procedure, because of the better trained and better type of officeholder produced by these schools. It represents progressive democratic America and must eventually become general.

Many hospital superintendents have jeopardized the support to their institutions by not according proper consideration to the newspaper representatives, seemingly trying to cover up things that the public should know. If there is a sore spot in your institution, the best way to do is to let the facts be known, if it is to be remedied. Go to your legislatures with *demands* for assistance; then if it is not given, the blame is shifted, and one should feel at liberty and consider it a duty to give to the public knowledge of the lack of assistance or help that should have been given.

The state's first duty is to the dependent, and when one sees magnificent capitol buildings, beautiful lawns, parks and state highways that spell large expenditures of state money, and then see how niggardly is the expenditure for those that should be well provided for, it seems that any way in which these matters can be brought before the people should be made use of. Take your newspaper man to the worst of your place and tell him what you need to overcome the conditions, and nine times out of ten he will only be too anxious help you out through the columns of his paper; but if you try to hide or cover up a condition that you are not proud of and the information is obtained from some disgruntled, discharged employee, the management is discredited. Show up the undesirable features of your institution, if you are not to blame for them yourself, and you will be able to remedy the condition by so doing. Give the public a chance to know of things directly from headquarters, and not through garbled statements. Ninety-eight per cent of the adverse criticism of state institutions is due to ignorance, and it is sad to relate that less than two per cent of commendation is given to balance the account.

We all know that the prognosis in mental cases is not, or should not, be as bad as hospital reports seem to indicate, and that with additional

maintenance, first-class equipment, competent help and an earlier diagnosis and commitment every institution could get more flattering returns from their efforts.

Usually a patient's commitment to a state hospital is a measure of last resort and only done after all other means have been resorted to. General practitioners hold the cases until the family gets discouraged. The stigma and disgrace of commitment deter the relatives from taking this step, and the patient is taken to a sanitarium, where the patient stays until the money of the family is exhausted and he is compelled to leave before results are obtained, and they are then usually taken home for a considerable period of time, and when there is absolutely no other way for the relatives to put the evil day off longer, the patient is sent to the state hospital too late to receive any benefit from treatment and finds simply a place of refuge, when early commitment and treatment might have been of great benefit to him.

As I read this paper over it struck me that those who heard it would be inclined to say the writer was a pessimist, to say the least, but that is not true, because this is simply a statement of facts, deplorable as it may seem, and, to the contrary, I feel decidedly optimistic as to the results, both in the preventive measures that will certainly be used in the near future and the more liberal aid that will be given when the public realizes the importance of mental disease as a sociological factor. The withdrawal of large numbers of persons from productive occupations is in itself bad enough, but the sufferings of the patients and the worry and anxiety of the family are even worse. What greater problem faces the public at this time than the prevention and cure of insanity, and what field is broader and less worked out? If insanity is not increasing, it is certainly not decreasing to any appreciable extent, and whether increasing or not, the fact remains that there is an increase in the numbers in the institutions, and it is with this fact we have to deal. The vast saving to the state which accrues from measures to prevent insanity must be emphasized. The enormous advantages resulting from the treatment of incipient cases from an economic as well as a humanitarian standpoint must be recognized.

The significance of over-indulgence in alcohol, of syphilis and heredity should be fully demon-



strated; the exploitation of the evils of procreation among defectives, the early recognition of the neuropathic character, and the value of studies in eugenics should receive much more attention and a better understanding on the part of the general medical profession of the nervous and mental manifestation of the individual would result if more attention was given this subject in our medical schools. Marriage laws for the restriction of defective delinquency do little but add illegitimacy to degeneracy, and certainly do not reach this class that should be restricted, because marriage is of little moment to them. While it is seldom safe to prophesy, there are good reasons to hope for a decrease in insanity and defective delinquency in the coming years. Many forces are at work which make for temperance, morality, intelligent and hygienic living and these things, with properly equipped and financed institutions, should bring about in time a better average condition of both physical and mental health.

### INCIPIENT PSYCHOSES.\*

G. H. MOODY, M. D.

SAN ANTONIO, TEX.

Upon first consideration one might think it easy to write a paper upon this subject that would be of interest to an Association of Alienists, but only a casual thought would permit of such conclusion.

One could review the various psychoses in their supposed incipency, but that would be elementary and unimportant.

It would be useless for us to take time to convince each other that untold numbers of cases of insanity could be prevented if proper steps could be taken in the very incipency of the trouble. The majority of us know that the difficulties for the physician in this stage are greater perhaps than in the incipency of any other class of cases; that the patient and the relatives are frequently the last ones in the community to recognize the symptoms when coming on insidiously; that those most prone to the development of a psychosis many times already have eccentricities for which allowances have been made; that each mental disorder, either slight or great, is always modified

in symptoms by the original and acquired mental peculiarities of the individual. As every personality has its difference in type in health, so every psychosis, even if in similar diagnostic groups, is different in each individual and only a familiarity with symptoms from long, continued observation will, at all times, make possible the recognition and diagnosis of an impending psychosis in its early incipency; and that even when the condition is detected, if very early, the greatest difficulty has just begun; that it is often difficult in incipient cases to convince the patient, and equally so sometimes to convince the relatives that something is wrong and that definite scientific treatment is necessary.

Indeed, some patients who happen to be especially brilliant and studious and seek seclusion and quietude and manifest conscientious scruples and extreme thoughtfulness beyond the usual, are thought by their friends to be unusually strong mentally, and if we undertook to convince them that such an individual is really out of harmony with his surroundings and incapable of proper adaptation to them and that he is developing a mental disorder, they usually decide that we might be mistaken. After the symptoms have developed sufficiently to convince them, the tendency still lingers for them to offer their opinions about everything except the particular diagnosis and medicinal treatment, forgetting, or not at all knowing, that there are many other features that are of greater importance to the patient and that they are not entitled to scientific opinions upon subjects with which they have had no opportunity to become familiar.

The mere title of this paper invites one's attention to questions which have not been settled and cannot be settled at this time, but which may at least evoke an instructive discussion.

What constitutes an incipency psychosis in a given individual? At what stage of one's mental or nervous condition may it be said that an incipient psychosis has begun? When can it be said that it has passed out of the incipient stage into one of full development? Mildness of symptoms cannot gauge the transition stages, because in many psychoses the symptoms are always mild, even to the extent of rendering it difficult sometimes to decide if the patient really has passed over the borderline.

Duration is hardly a determining factor, because some cases of severe psychosis develop over

\*Read before the Fifth Annual Meeting of Alienists and Neurologists of the U. S., June 20, 1916.



night. Evidently an adequate insight into the personal equation of the individual, and not a mere recital of the detectable symptoms at some given time, is of greatest importance, especially when the symptoms are very mild. Personal or family peculiarities of lifetime standing may be taken as symptoms of a beginning psychosis in some individuals, and these found in other individuals would constitute unmistakable symptoms of a psychosis.

It is comparatively rare that we see mild psychoses at their beginning, this applying as well, of course, to the so-called psycho-neuroses. We recall, however, that the time was when physicians figured only in an unimportant way in the treatment and management of fully developed cases of insanity.

It may be hoped that further education of the public may bring all these cases much earlier to seek medical advice and treatment. This being an age of preventive medicine, it is not too commonplace nor too devoid of scientific utility for us to discuss means of disseminating such information as will bring about this prophylactic result.

In some individuals mild neurasthenic or psychasthenic symptoms have existed so long that they form a part of the natural characteristics of such persons. They have existed since early childhood and their essential basis is even further back than this. At no time during their lifetime could a more or less exaggeration of these symptoms be considered to mark the beginning of their psychic disorder. It is true that an acute psychosis may be engrafted upon a basis of this kind and frequently is, but is not its real inceptancy further back? Yet when one of these mild cases consults a physician for the first time, are we not too prone to let that time mark the beginning of the trouble?

A restoration in paresis is spoken of as perhaps possible if seen in its inceptancy. Is anyone present sure he has seen a case of paresis in its inceptancy? Does its beginning reveal symptoms which are suspicious of paresis?

Perhaps there are many cases of dementia præcox which exist for many months in such mild form that the symptoms never pass beyond the knowledge of the patient, who recognizes a disharmony, but prefers not to take anyone into his confidence about it and finally makes acceptable adaptations with his relationships in life and ultimately comes out of it with a degree

of deterioration which establishes for him a mental level and an initiative below that which he would otherwise have reached. If some time during this patient's career some sudden stress should greatly exaggerate his symptoms and he should temporarily lose his control and fall into the hands of a physician, there is danger that this time might be thought to mark the inceptant stage of his psychosis. And so it is that a very careful consideration of this subject of inceptancy may impress us that we are not seeing a great number of our cases in their inceptancy and that our accustomed habits in prognosis and management may become somewhat modified.

In the case of the individual with a mild neurasthenic or psychasthenic basis a recovery from an acutely developed psychosis and a return to his standard would really constitute a recovery from our standpoint, with a full knowledge of his case, and it also constitutes a satisfactory recovery from the viewpoint of his relatives and lifelong associates, and the same would apply to the mild dementia præcox case and to many others we see frequently and whom we may be called upon for various reasons to examine and to treat, or to render an opinion about.

## CARE OF THE NEWBORN.\*

THOMAS WARLOE, M. D.,

CHICAGO

*Mr. President and Fellows of the Society:* My only excuse for appearing before you is that our president has asked me to do so. Be it far from me to think for a moment that I can teach you anything new; but I believe it is good for all of us to learn from each other through a general discussion what we have learned in the great school of experience.

The subject allotted me is "Care of the Newborn." The care of the newborn starts the moment the head has passed the vulva. The attendant should then wash the eyes with some boric acid solution or plain sterilized water. The mouth and nose should be cleansed from mucus.

When the body is born, the first thing to do is to take care of the umbilical cord. After pulsation has ceased, I always apply three ligatures instead of two, as one learns from his text-books, applying one on the placenta side and two on the

\*Read before the Northwest Branch of the Chicago Medical Society February 2, 1917.

infant's side—one outside of the other. I do this because the umbilical cord might shrink, and the ligature, however tight, will become loose, causing the child to bleed. This happened once in my practice many years ago, since which time I have always applied the extra ligature, and I have had no more hemorrhages.

Into the eyes, that were previously washed, as stated above, should be dropped one or two drops of a one or two per cent solution of silver nitrate or a few drops of twenty per cent solution of argyrol, and the child is ready for the cleansing.

If the confinement takes place in a hospital, everything is well taken care of. It often happens, however, in our practices, that we doctors have to attend to these things ourselves, or at least give advice to some more or less inexperienced person as to what to do and how to do it.

First the child should be oiled to loosen the vernix caseosa and then washed with warm water. Occasionally a mild soap may be needed in the axillæ and groins, but as a rule a soft cloth and warm water are sufficient. There is some disagreement among the learned in regard to the full bath for the newborn. I have been in maternities where the child was plunged into the bathtub immediately after delivery, and I have been in equally good maternities where such a practice was condemned severely, and in both kinds of maternities the infants got along excellently. Therefore, I believe it rests with the individual doctor what he chooses.

The umbilical cord should now be dressed, and here, also, are many different ways. I, for my part, think the plainest and simplest way is the best. I take a piece of sterilized gauze about three inches square, cut a hole in the center, pull the stump through this and fold the ends of the gauze over it. I have never had any reason to change this method.

Then comes the dressing, which should be loose and warm. This is a matter with which we doctors have our greatest fight, especially in the homes of the Scandinavian people. They seem to have inherited the idea from their forefathers that the tighter they strap and wrap the infant from the toes to the axillæ, the stronger, straighter and healthier that infant will grow up. I dare say I have made good friends of many a child, when I was called in a hurry to see a child who would not stop crying, although the poor, frantic mother would shake it, hop it up

and down, slap it on the abdomen and buttocks without relief, I would take away the strong bands that bind the tender limbs together, remove the binder that prevents the infant from breathing properly or the abdomen from distending, and the expression of the child would soon change from one of anguish and misery to one of content and happiness. So I would urge all my colleagues to advise all young, inexperienced mothers to dress their infants in loose and comfortable clothing. In this connection I would also advise that diapers should be soft and warm, and they should be changed frequently, and they should always be washed and dried before using a second time.

Borated taleum or stearate of zine are excellent as dusting powders for the groins and axillæ.

When the mother has rested for a few hours, the child should be put to the breast. Before the milk is established the child gets sterilized water without sugar, kummel, brandy, paregoric or other quieting or stimulating remedies that some old lady who knows may choose. If the mother can nurse the baby, it is ideal; if not, some artificial feeding must be decided upon, and here we must remember that what is good for one may not be good for another. Therefore, no one rule can be laid down for all.

If the infant suffers from icterus neonatorum, —the mild form,—a dose of castor oil, some calomel and an enema of normal salt solution generally will clear up the situation. The same treatment will also help if the child is constipated.

If the child has not passed urine after the first day, the urinary organs must be examined for any deformity. One should feel above the pubes to see if the bladder is distended. If there is no deformity, a little cold water should be sprinkled on the hypogastrium, or a warm bath given.

Sometimes the breasts become swollen and some milk may appear in the nipples. Again the laity teaches it should be pressed out! This should never be done; leave it alone; *ut aliquid fiat* apply some warm oil and a cotton compress, and it will get well by itself. If a small abscess should form, it should be opened under the ordinary rules.

This is about all I have to say about the care of the newborn. I shall be glad to learn more from a general discussion. You will notice that I have gone into details, which many of you may think entirely unnecessary and superfluous, but

(Continued on page 40.)



# ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society, under the direction of the Publication Committee of the Council.

## GENERAL OFFICERS, 1917-18

PRESIDENT.....E. B. COOLLEY, Danville  
 PRESIDENT-ELECT.....E. W. FIEGENBAUM, Edwardsville  
 FIRST VICE-PRESIDENT.....E. P. SLOAN, Bloomington  
 SECOND VICE-PRESIDENT.....SADIE BAY ADAIR, Chicago  
 TREASURER.....A. J. MARKLEY, Belvidere  
 SECRETARY.....W. H. GILMORE, Mt. Vernon  
 (Ex-officio Clerk of the Council)

## THE COUNCIL

District 1—EMIL WINDMUELLER, Woodstock.  
 District 2—EDWIN S. GILLESPIE, Wenona.  
 District 3—CLYDE D. PENCE, Chicago.  
 District 4—AUGUST H. ARP, Moline.  
 District 5—C. S. NELSON, Springfield.  
 District 6—C. D. CENTER, Quincy.  
 District 7—C. F. BURKHARDT, Effingham.  
 District 8—C. E. PRICE, Robinson.  
 District 9—FRANK C. SIBLEY, Carmi.  
 CLYDE D. PENCE, *Chairman*, 8338 Ogden Avenue.

Send original articles and all communications relating to advertisements and mailing list to Dr. Clyde D. Pence, Editor, 8338 Ogden Avenue.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items to Dr. Henry G. Ohls, *Managing Editor*, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

## MEDICO-LEGAL COMMITTEE

ANDY HALL.....Mt. Vernon  
 WILLIAM O. KROHN.....Chicago  
 GEORGE STACY.....Jacksonville  
 D. R. MACMARTIN.....Chicago  
 C. B. KING, *Chairman*.....8938 Jackson Blvd., Chicago  
 THOMAS D. CANTRELL, *Secretary*.....Bloomington

## GENERAL COUNSEL

ROBERT J. FOLONIE.....39 S. La Salle Street, Chicago

State society will pay no bills for legal services except those contracted by the committee. Notify the Chairman at once. Don't employ attorneys.

July, 1917

## Editorials

### MEDICAL OFFICERS WANTED IN THE ARMY

Medical men are wanted for military service, and the Government must have them. Let us not wait until the Government finds itself crippled because of an inefficient Medical Department. Every doctor in Illinois should offer his services now to his country, and let the Government decide where he may be of most service.

### CHANGES IN BY-LAWS.

The following changes in the by-laws of the Illinois State Medical Society were voted upon and passed at the annual meeting at Bloomington:

Page 17, Section 1, after the words "a committee on arrangements" insert the words, "committee on grievances."

On page 20, under Section 6, after the words "in no instance shall the society pay judgments or compromises," insert paragraph as follows:

"No defense shall be made for any member of the Society who, in the judgment of the Medico-Legal Committee, has in the particular instance been guilty of illegal, immoral or unethical conduct, and if the committee shall receive knowledge that any member has been guilty of such conduct then, beside refusing to defend the case, they shall make report of the fact to the Committee on Grievances. Exoneration of the member on the part of the Committee on Grievances shall operate to fully reinstate the rights of the member to defense by the Medico-Legal Committee."

After Section 8, page 21, insert as follows:

Section 9, Committee on Grievances.—The Committee on Grievances shall consist of twelve members, shall be divided into four sub-committees of three members each, each sub-committee to act within the territorial limits hereinafter prescribed. The House of Delegates shall elect three members from each of the territorial districts herein created for terms of three years, excepting the first year when the House of Delegates shall elect one member for one year, one member for two years and one member for three years.

The territorial jurisdiction of each of the said sub-committees shall be the same as the territorial jurisdiction of the respective appellate courts of Illinois.

Each said sub-committee shall be and is hereby made a separate court to determine the moral and ethical fitness of physicians within its territorial district.

Any decision of the sub-committee as to a member of this society may be appealed by said member to the committee as a whole at any time within two weeks after the decision of the sub-committee by notification of appeal given to the sub-committee or to the secretary of this society.

Appeal from the Committee on Grievances may be made to the Council and to the House of Delegates of this Society.

### TUBERCULOSIS AND WAR

In the June 16th number of the Journal of the American Medical Association, appears a leading article by Maurice Fishberg under the above title. The article as it appears to us is so far from the teachings of today and so far from the spirit of American patriotism, that we can not desist from voicing a protest.

The trend of the paper in question is to show that slight pulmonary symptoms or diseases are not legitimate causes of exemption for military service. The army service demands that a soldier's hearing must be good, that his vision must be good, that he must have opposing molars, and



in general the soldier must be a physically fit specimen, as determined by a rather rigid examination, yet the author intimates we should not be too exacting regarding those men having tubercular tendencies. American patriotism does not demand army service from America's invalids; neither will she knowingly accept such services. A man suffering from pulmonary tuberculosis even in its incipency has fighting enough to do in order to live.

Aside from this, however, the argument the author puts forth is certainly not well based. Practically every army has had its pestilence. In former days it was cholera, smallpox, dysenteries, typhus and typhoid fevers, yellow fever and malarias. These diseases in military service are today mainly controlled, and are not the menace to the army or to civilization they formerly were; but for all the boasted acquirements of medicine of the last few decades we still have our pestilence, both in civil life and in military service. If the writers of war history in France are to be credited in the least, then France is having not only her military enemy to fight but a real pestilence as well, and that pestilence is tuberculosis.

The present methods of warfare are probably more conducive to tuberculosis than they were in the case of the campaigns of other armies, and this may help to explain the apparent great increase in army tuberculosis. The overcrowding plus "trench" methods are certainly conducive to pulmonary disease in the robust. What must it then be for those men who show mild or indefinite signs or symptoms of pulmonary disease, whether actually tuberculous or not. It must be remembered that the food of armies is not always abundant, not always appetizing, and not always that which is most suitable for the individual.

The doctor says, "A history of a previous attack of pleurisy, dry or with effusion, should not bar one from serving his country during war. While it is true that the vast majority of pleurisy cases are tuberculous in origin, and a large proportion of these patients develop active phthisis in later years, still not all do develop the disease." We presume then that because a small percentage of such cases do not develop active tuberculosis, while living a favorable civil life, that all of them should be sent to war, so that

one might not escape service. The argument, of course, is false.

Thus far we have considered the individual only. Is there a medical man who would go to war and choose to be as closely associated in trench warfare as is now necessary with a number of companions who have a persistent chronic bronchitis, a pleurisy, a cough perhaps with expectoration, hemoptysis, bronchiectasis, asthma, etc., etc. The soldier has dangers enough to face from the enemy, and it is outrageous to endanger him with infectious disease, when it is possible to save him from such exposure.

The stories coming from France now are conclusive proof that many of her soldiers are developing tuberculosis from old and supposedly healed lesions, from incipient lesions not detected by the medical examiner, or from new infection acquired in the trenches. The army should have men with strong powers of resistance, and with vitality. The man with a supposedly healed tuberculosis has not demonstrated a strong resistance to the infection, otherwise he would not have had it. Army officers want men who can stand gruelling punishment, hardships and exposure.

There are many places at home where the tuberculous man may serve his country to a better advantage—better for the country, better for himself, and better for the army in the field. The outdoor life of farming and producing food for the army is just as important as military duty.

At this time exemption boards are being formed all over the country. On each board is a physician who will, in many instances, pass on the physical fitness of men for army service. Examining physicians at all the recruiting stations will be working hard. As we view the situation it is to be hoped that these physicians will entertain a different opinion of tuberculosis in war than does the author referred to.

The history of tuberculosis in the present war is but begun. It will be many years before "finis" may be written.

---

#### RUSH ALUMNI

The Alumni of Rush Medical College who were in attendance at the Illinois State Medical Society held a pleasant reunion and luncheon

at noon Wednesday, May 9, at the Baptist Church, Bloomington.

There were a hundred or more in attendance and the affair was much enjoyed. A fine spread was served by the women of the Baptist Church, after which, in the absence of the president, Dr. F. C. Vandervoort of Bloomington, took charge as toastmaster. The Doctor proved fully equal to the occasion, being in his most happy mood.

Those who responded to toasts were, Dr. W. E. Guthrie, Bloomington, class of 1881; Dr. W. T. McLean of Moroa, class of 1881; Dr. Thomas M. McIlvaine, Peoria, class of 1881; Dr. O. B. Wills, Peoria, class of 1869; Dr. J. W. Petit, Ottawa, class of 1884; Dr. E. Mammen of Bloomington, class of 1884, and Dr. Geo. N. Kreider of Springfield, guest.

One of the most interesting speakers of the older members was Dr. McClellan of the class of 1878.

The election of officers resulted in the choice of Dr. McLean of Maroa, for president; Dr. Fullenwider of LaSalle, vice-president, and Dr. Thomas D. Cantrell of Bloomington, secretary.

## Correspondence

### HEALTH INSURANCE

AMERICAN MEDICAL ASSOCIATION,  
535 N. DEARBORN STREET, CHICAGO.

June 20, 1917.

*To The Editor:* In the ILLINOIS MEDICAL JOURNAL for June, 1917, in the correspondence department appeared a letter on Health Insurance from Mr. Eugene T. Lies of the United Charities in which were made some statements regarding the attitude of the Council on Health and Public Instruction of the American Medical Association on the subject. Mr. Lies also quoted me as being personally in favor of health insurance.

In order that the attitude of the Council on this subject may be clearly understood, I wish to point out that the Council has never at any time taken any official action on the subject of health insurance; neither has it at any time ever expressed any opinion on this question. It has intentionally suspended judgment, pending further study of this complicated problem.

In 1915, shortly after the San Francisco meeting of the Association, the Council appointed a special committee on social insurance, made up of Dr. Alexander Lambert of New York, Dr. Henry B. Favill of Chicago and Dr. Frederic J. Cotton of Boston, to study the question, to collect all available information thereon and to publish and distribute such material for the information of the medical profession. Following Dr. Favill's death early in 1916, Dr. Frank Billings took his place on this committee. The Council has published seven pamphlets prepared by this committee and has three more in process of publication. It is still engaged in studying this question and collecting material, but it has never endorsed any plan for health insurance or any law or bill on this subject. Mr. Lies' statement, therefore, regarding the "favorable attitude of the Council on Health and Public Instruction of the American Medical Association as publicly expressed" is evidently based on a misapprehension of the position of the Council.

Regarding my personal attitude, as Mr. Lies has included by name in the list of those "who have declared themselves in favor of health insurance," I can only say that I have never made any such statement, either publicly or privately. The only statement which I recall that could possibly be so construed was made at the annual meeting of the American Association for Labor Legislation in Columbus last fall. In the discussion of Dr. Lambert's paper, I emphasized the importance of the problem and the need of careful study of it and urged that time be given for the education of the medical profession, adding, as I remember, that I did not know of any physician who had given the question careful study who was opposed to health insurance. I doubt whether this statement would hold good at present.

The attitude of the Council as well as my own position on this question is one of investigation and suspended judgment. That this is the attitude of the Committee on Social Insurance as well is shown by the resolutions which Dr. Lambert presented to the House of Delegates at New York as the summing up of the two years' work of his committee. These resolutions which appeared in The Journal of the American Medical Association for June 9, 1917, page 1755, contained no endorsement of health insurance but authorized the Council on Health



and Public Instruction "to continue to study and to make reports on the future development of social insurance legislation and to co-operate when possible in the molding of these laws that the health of the community may be properly safeguarded and the interests of the medical profession protected" and instructed the Council "to insist that such legislation shall provide for freedom of choice of physicians by the insured, payment of the physician in proportion to the amount of work done, separation of the functions of medical official supervision from the functions of daily care of the sick and adequate representation of the medical profession on the appropriate administrative bodies." The Council, therefore, under the instructions of the House of Delegates will continue its investigation of this question without any expression of opinion as to its advisability, but will so far as possible protect the interests of the medical profession in any such legislation which may be passed.

Very truly yours,

FREDERICK R. GREEN,  
Secretary.

Council on Health and Public Instruction.

### SURGICAL INSTRUMENTS

Chicago, June 26, 1917.

*To the Editor:*—The impression seems to be abroad among the medical profession that at the present time there is such a scarcity of surgical instruments and supplies that it is practically impossible to obtain them.

Now, we wish to state that this impression is incorrect. While the government has placed contracts for surgical instruments and equipment to supply an army of approximately a million men, they do not insist that all these goods must be supplied immediately, but the delivery time is spread over a period of six months, or even longer in some instances. The American manufacturers of surgical instruments have greatly increased their facilities and as the army medical service only requires certain types of instruments, it will no doubt be possible for the trade to supply the profession and the hospitals with the necessities to carry on their work.

Our own firm has been awarded a contract for several hundred complete sets of eye operating instruments, but as we have made preparations in advance to take care of this army work,

we will still be in a position to supply the needs of our regular customers.

Very truly yours,

V. MUELLER & Co.,

Per V. Mueller.

1715-81 Ogden Ave.

### IT WAS SOME MEETING

Bloomington, Ill., June 11, 1915.

*To the Editor:*—As Bloomington takes a retrospective view of the State Medical Society all seem to vote it a success. The business men seem to think the Doctors about the best bunch of fellows that have visited our city in a long time.

The McLean County Medical Society is much the better for having entertained you. Every member was a worker, not a slacker among them, and the united effort has tended to unite the members in sympathy and service and you will hear of better and greater work being done in the near future than in the past because of the meeting of the State Society here.

All bills are now paid and money in the treasury, and no passing the hat to make up a deficit. While we are not self satisfied, seeing many things now that might have been done better, yet as a whole we feel the meeting was a success. We wish to thank every member that attended the meeting for the part he took in making the meeting so pleasant and profitable.

Yours fraternally,

THOMAS D. CANTRELL, Secretary.

### INDEMNITY INSURANCE.

As all members of the Illinois State Medical Society are assured ample defense by the Society, we find it impossible for our members to purchase further insurance indemnifying them against possible judgments, without paying again for their defense.

The Medico-Legal Committee has been in conference with insurance companies, trying to eliminate this double expense and we hope to get a proposition from some reputable company that we will be able to endorse but as yet the Medico-Legal committee has not personally or collectively endorsed any particular kind of insurance or any particular company.



Some letters containing misleading statements have been sent out by one insurance company and the committee in session at Mt. Vernon, Illinois, June 14, 1917, authorized that this statement be published in the JOURNAL.

Should any further letters sent out by insurance companies' referring to the Medico-Legal committee in any way recommending this policy the Medico-Legal committee would be glad to receive a copy of same at once.

THOMAS D. CANTRELL,  
Secretary, Medico-Legal Committee.

### OPTOMETRY ACT VOID

The Supreme Court of Illinois has at the June term declared the Optometry Act of Illinois unconstitutional.

The case arose in a prosecution under the act against one Griffith, who tested eyes of a patient with glasses and collected a fee. He was fined for practising optometry without a license. The Supreme Court places its decision that the act is void upon the ground that the warrant for such an act lies only in securing the public health, safety and welfare. The exemptions in the act—those who have practised for three years, regardless of their character, habits, skill or knowledge of optometry—show the act to be unreasonable. The court holds that as no particular standard of skill is required and no examinations prescribed, the fitting of glasses under the act does not differ materially from the fitting of shoes by a shoe dealer, and no more reason exists for licensing one than the other. A judgment of conviction of Griffith is reversed.

This decision of the court is in line with its holdings in later years, that the practice of new and special professions will not be countenanced, unless a genuine standard is fixed to which applicants must conform, creating a valid branch of scientific learning not only in name but in fact. The medical profession is to be congratulated upon the virtual elimination of one of the "new professions," the intent of the sponsors being to impose a limitation on the field of legitimate medicine and surgery.

ROBERT J. FOLONIE,  
General Counsel.

## Public Health

### NEW MEDICAL AND SANITARY LAWS

While the Forty-ninth General Assembly still holds the record for the passage of the greatest number of salutary medical, health and social laws, the Fiftieth General Assembly, which has just closed its sessions, stands perhaps without an equal in the importance of the laws enacted.

The consolidation bill, creating the Civil Administration Code, is perhaps the greatest piece of constructive legislation passed in any state in recent years. So far as medical and health officers are concerned, this law is almost revolutionary. The examination and licensure of physicians, other practitioners, midwives and embalmers has been taken from the State Health Department and placed with a new department of Registration and Education, leaving the Health Department to be devoted to purely sanitary and health functions.

The law also abolishes the State Board of Health, together with scores of other boards, and places the health department under the supervision of a director with a board purely advisory in character. This law has been reviewed in these pages.

### MEDICAL PRACTICE ACT GREATLY IMPROVED

The new Medical Practice Act, which goes in effect July 1, places Illinois in the forefront in the regulation of the practice of medicine. The bill was the result of many conferences between the medical profession and osteopathic practitioners and bore the stamp of approval of all factions, while it was strongly endorsed and backed by the Illinois State Medical Society and the American Medical Association.

The law provides for a medical course of at least five years together with one year of hospital internship as a prerequisite for admission to examination for all persons beginning their medical education after 1917. Other practitioners, or those desiring to practice the art of healing without the internal or external use of drugs or the employment of operative surgery, are required to have a course of four years in a recognized school, while all midwives must be graduates of schools of midwifery in good standing.

Admission to a medical school or school for other practitioners in good standing requires preliminary education equivalent to graduation from a high school. Midwifery schools must require a preliminary education equivalent to that given in graded schools of all students on admission.

The examinations of physicians and of other practitioners shall be the same except that the latter shall not include materia medica, therapeutics, surgery and obstetrics. Other practitioners are to be examined in the methods of practice of their own schools and licensed to practice only the methods of their own schools. Other practitioners graduated from schools in which obstetrics is taught, may take the examination for licensure in midwifery.

The law is broader than the old medical practice

act in its provisions for licensure through reciprocity, leaving this very largely to the discretion of the Department of Registration and Education. Licenses of physicians, other practitioners or midwives may be revoked for a number of specified causes. Other practitioners who are authorized to practice without the internal or external use of drugs, are permitted, under the act, to use such antiseptics as are prescribed by the Department of Public Health for the prevention of the spread of communicable diseases and to use antidotes in cases of emergency involving acute poisoning.

The Department of Registration and Education has jurisdiction over and the right to revoke all licenses issued at any time in the state.

#### PUBLIC HEALTH DISTRICTS

Another law which is of the utmost significance is that which authorizes the organization of public health districts and permits the establishment of health departments for these districts. The law provides that any town or two or more adjacent towns in counties under township organization or any road districts or two or more adjacent road districts in counties not under township organizations or towns or road districts in adjacent counties may be organized into public health districts by a referendum vote. These districts may levy a public health tax of not to exceed four mills on the dollar and are authorized to appoint a public health officer to be taken from a list of eligibles supplied by the State Department of Public Health. The health officer shall recommend for appointment such nurses, chemists, experts and assistants as he may deem necessary and may equip and maintain offices and laboratories. The minimum compensation of the health officer is specified by the law at \$1,500 per annum and the health officer acts as the executive officer of the Board of Health, is charged with enforcing the rules of the State Department of Public Health and all state laws pertaining to the health of the people; to exercise the rights and duties of all township and county boards of health and to enforce village and incorporated town ordinances. The health officer is also required to control communicable diseases in accordance with the rules of the State Department of Public Health, to make sanitary investigations, to conduct a free dental clinic for children, to advise city, village, town and school authorities. He is required to devote his entire time to his official duties.

Through the provisions of this law, townships and road districts may join together to secure efficient health organization and this may be attained without prohibitive cost to any community.

#### HEALTH OFFICERS NEED NOT BE RESIDENTS

Another law which should tend to improve sanitary and health administration in the state is an amendment to the cities and villages act providing that in cities or villages of less than two hundred thousand population, city engineers, health officers and other officials requiring technical training and knowledge need not be residents of the municipality.

#### EMBALMER'S LAW AMENDED

The act regulating embalming has been amended to establish higher educational qualifications and to permit the regulation of schools of embalming.

#### NEW PROVISION OF VITAL STATISTICS ACT

The act for the registration of births and deaths has been amended to provide that local registrars shall file copies of certificates recorded with them in the office of the county clerk at the close of each month instead of at the end of the year. The amendment also provides that, in case of birth reports, the local registrar shall obtain the given name of the child before filing the record with the county clerk. These amendments were desired by county clerks who wanted their records to be up to date so that they might be enabled to issue certified copies for insurance, court and other purposes.

#### TUBERCULOSIS SANATORIA

Two amendments to the municipal tuberculosis sanatorium act will be generally commended. One provides that municipal sanatoria come under the provisions of civil service in regard to their officers and employes, while the second amendment enables cities of one hundred thousand population or less to impose as much as a two mill tax for the establishment and maintenance of sanatoria. The original law limited the appropriation to one mill which is inadequate in most cities of less than one hundred thousand population.

#### THE NEW DEPARTMENT OF REGISTRATION AND EDUCATION.

Beginning with July 1st, the examinations and licensure of physicians, other practitioners, midwives and embalmers, formerly carried out by the State Board of Health, will be in the hands of the newly created Department of Registration and Education of which Mr. Francis W. Shepardson is director, and all applications for examination for licensure and all correspondence relative to past registration should be addressed to the new department.

The State Department of Registration and Education not only assumes the functions previously performed by the State Board of Health, but will have supervision over the examination of licensures of all other professions, including pharmacists, dentists, nurses and barbers.

Mr. E. A. Wreidt, of Chicago, has been appointed assistant director, and Mr. Fred C. Dodds, formerly secretary of the State Board of Pharmacy, has been made superintendent of registration.

Aside from its duties as an examining and licensing body, the Department of Registration and Education assumes the functions formerly performed by the boards of trustees of the State Normal Schools and has supervision over state work in natural history and natural resources, maintaining state museum and having charge of duties previously performed by the State Entomologist and the State Geological Survey.



## THE WAR-TIME TUBERCULOSIS PROGRAM IN ILLINOIS.

One of the main important functions to be performed by the newly created State Department of Public Health will be that of preventing the spread of tuberculosis in military service and in developing the machinery for the proper care of returned tuberculous soldiers.

As is generally known, tuberculosis has become the great scourge of the European warring nations. In France it is stated that a half million of the people are incapacitated by wounds of war and that another half million are incapacitated by active tuberculosis and the disease rapidly spreading. On account of inadequate provision for sanatorium care by the French government, over one hundred thousand active consumptive soldiers have been compelled to return to their homes where they will unquestionably spread the disease in their families.

In England the preparation to meet the tuberculosis war problem was more complete than in any other nation, while the prevalence of the disease prior to the war was less in England than in any other of the larger European countries. In England, however, the central government has found itself wholly unable to care for the returned tuberculous soldiers and this duty has been delegated to the various boroughs and counties.

The Illinois program for meeting the tuberculous war-time problem includes a tuberculosis census of all male citizens of military age, so that the tuberculous history of each individual may be placed in the hands of recruiting officers and of the special examiners recently authorized by the United States Government for the detection of tuberculosis among the troops. The plan also contemplates the establishment of dispensaries, visiting nurses, physicians and sanatoria in every county in the state so that there will be adequate provision for the care of infected soldiers and tuberculous individuals in the civil population.

This entire program is being carried out through the co-operation of the State Department of Health, the Illinois Tuberculosis Association, and the Co-operating Committee on the Tuberculosis War Program of the State Council of Defense.

Dr. George Thomas Palmer, who is president of the Illinois Tuberculosis Association, and chairman of the Tuberculosis Committee of the State Council of Defense, has recently been appointed assistant director of the State Department of Public Health and will be assigned for an indefinite period of time to the working out of the plans of the military and civil tuberculosis program.

While the first object of the State Department of Health will be to carry out the program against tuberculosis necessitated by war-time conditions, the newly created Bureau of Tuberculosis will be immediately developed and placed on a firm foundation. This Bureau of Tuberculosis is the first official machinery created by the State of Illinois to carry out a constructive warfare against tuberculosis in the state.

## MILITARY EXEMPTION BOARD.

The President of the United States, upon the recommendation of Governor Frank O. Lowden, has appointed boards of three persons to serve in each county in the state, with additional boards for larger communities on the basis of one board to thirty thousand population, to pass upon the men registered for military service under the universal service law to determine those who are to be exempted.

These boards were selected with the utmost care and without regard to political affiliation.

Every board consists of two prominent laymen and one physician and the nomination of the medical members was delegated by the governor to the State Board of Health. It was the original intention to submit all names of nominees to the county medical societies for official endorsement, but the demand of the Federal Government that these boards should be appointed at once rendered this impossible.

The exemption boards in the various communities are already organizing and will be expected to commence their service early in July. The duty is arduous and exceedingly difficult to perform. Inasmuch as it involves a question so vitally important to practically every family and household in the state, it is essential that such duty should be entrusted only to those of highest standing and unquestioned integrity and it is believed that the boards named are, for the most part, of the highest standard.

The physician members of the exemption boards in Illinois are as follows: (Corrected to July 9, 1917.)

*Adams County*, exclusive of city of Quincy—Dr. A. B. Bates, Camp Point.

*Alexander County*—Dr. George H. McNemer, Cairo.

*Bond County*—Dr. Wm. T. Easley, Greenville.

*Boone County*—Dr. Frank S. Whitman, II., Belvidere.

*Brown County*—Dr. Geo. L. Thompson, Mt. Sterling.

*Bureau County No. 1*, Bureau County, exclusive of townships of Lamoille, Clarion, Berlin, Westfield, Hall and Selby—Dr. Oliver J. Flint, Princeton.

*Bureau County No. 2*, townships of Lamoille, Clarion, Berlin, Westfield, Hall and Selby—Dr. Frank B. Schurtz, Spring Valley.

*Calhoun County*—Dr. W. A. Skeel, Kampsville.

*Carroll County*—Dr. Rollin B. Rice, Mt. Carroll.

*Cass County*—Dr. Chas. E. Soule, Beardstown.

*Champaign County No. 1*, Champaign County, exclusive of townships of Brown, East Bend, Ludlow, Harwood, Kerr, Compromise, Rantoul, Conduit, Newcomb, Mahomet, Hensley, Champaign and Scott—Dr. Otis O. Stanley Urbana.

*Champaign County No. 2*, townships of Brown, East Bend, Ludlow, Harwood, Kerr, Compromise, Rantoul, Conduit, Newcomb, Mahomet, Hensley, Champaign and Scott—Dr. C. B. Johnson.

*Christian County*—Dr. F. J. Eberspacher, Pana.

*Clark County*—Dr. Edward Pearce, Marshall.

*Clay County*—Dr. E. C. Park, Jr., Flora.

*Clinton County*—Dr. J. Q. Roane, Carlyle.

*Coles County*—Dr. Rufus J. Coultas, Mattoon.



- Cook County No. 1*, townships of Barrington, Hanover, Schaumburg, Palatine, Wheeling, Elk Grove, North, Field, Maine and Leyden—Dr. Carl Adam Starck, Palatine.
- Cook County No. 2*, township of Ridgeville—Dr. W. C. Danforth, Evanston.
- Cook County No. 3*, townships of Niles, Norwood Park and New Trier—Dr. Rufus B. Stolp, Kenilworth.
- Cook County No. 4*, township of Proviso—Dr. H. E. Jenkins, Forest Park.
- Cook County No. 5*, townships of Oak Park, Berwyn and Riverside—Dr. Arthur McNeal, Berwyn.
- Cook County No. 6*, townships of Cicero and Lyons—Dr. Harry J. Smejkal, 1936 S. 49th, Cicero.
- Cook County No. 7*, townships of Calumet, Worth Palos, Lemont and Stickney—Dr. Robt. L. James, Blue Island.
- Cook County No. 8*, townships of Thornton, Bremen and Orland—Dr. Bayard T. Stevenson, Harvey.
- Cook County No. 9*, townships of Bloom and Rich—Dr. Ira Chase Harman, Chicago Heights.
- Crawford County*—Dr. Chas. H. Voorheis, Hutsonville.
- Cumberland County*—Dr. Walter R. Rhodes, Toledo.
- DeKalb County*—Dr. James M. Everett, DeKalb.
- De Witt County*—Dr. Geo. S. Edmonson, Clinton.
- Douglas County*—Dr. Cyrus W. Rutherford, New-man.
- DuPage County*—Dr. John B. Hench, Hinsdale.
- Edgar County*—Dr. George H. Hunt, Paris.
- Edwards County*—Dr. Ross Lee Moter, Albion.
- Effingham County*—Dr. E. L. Damron, Effingham.
- Fayette County*—Dr. G. R. Van Vranken, Ramsey.
- Ford County*—Dr. Samuel M. Wylie, Paxton.
- Franklin County*—Dr. R. E. Poindexter, Benton.
- Fulton County No. 1*, Fulton County, exclusive of townships of Union, Ellisville, Young, Hickory, Fairview, Farmington, Lee, Deerfield, Canton, Orion and Joshua—Dr. J. C. Simmons.
- Gallatin County*—Dr. J. W. Bowling, Shawneetown.
- Green County*—Dr. Howard Burns, Carrollton.
- Grundy County*—Dr. Roscoe M. Whitman, Morris.
- Hamilton County*—Dr. J. M. Sims, Macedonia.
- Hancock County*—Dr. S. M. Parr, Carthage.
- Hardin County*—Dr. W. G. Gregory, Cave in Rock.
- Henderson County*—Dr. Wm. D. Henderson, Biggs-ville.
- Henry County*—Dr. D. F. Stewart, Galva.
- Iroquois County*—Dr. Henry W. Clifton, Watseka.
- Jackson County*—Dr. R. B. Essick, Murphysboro.
- Jasper County*—Dr. Jas. P. Prestley, Newton.
- Jefferson County*—Dr. Lewis C. Morgan, Mt. Vernon.
- Jersey County*—Dr. H. R. Gledhill, Jerseyville.
- JoDaviess County*—Dr. B. M. Bench, Galena.
- Johnson County*—Dr. Hartley W. Walker, Grantsburg.
- Kane County No. 1*, Kane County, exclusive of townships of Elgin, Dundee, Rutland and Hampshire and city of Aurora—Dr. H. T. Mostrone.
- Kane County No. 2*, townships of Elgin, Rutland and Hampshire—Dr. A. E. MacCornack, Elgin.
- Kankakee County*—Dr. Paul Ramond Badger, Kankakee.
- Kendall County*—Dr. R. A. McClelland, Yorkville.
- Knox County No. 1*, Knox County, exclusive of township of Galesburg—Dr. Alex F. Stewart, Oneida.
- Knox County No. 2*, township of Galesburg—Dr. J. F. Percy, Galesburg.
- LaSalle County No. 1*, LaSalle County, exclusive of townships of Peru, LaSalle, Utica, Deer Park, Vermilion, Eden, Fall River, Brookfield, Farm Ridge, Grand Rapids, Allen, Otter Creek, Bruce, Eagle, Richland, Osage and Groveland—Dr. J. W. Pettit, Ottawa.
- LaSalle County No. 2*, townships of Peru, LaSalle, Utica, Deer Park, Vermilion, Eden and Hope—Dr. H. M. Orr, LaSalle.
- LaSalle County No. 3*, townships of Brookfield, Fall River, Allen, Farm Ridge, Grand Rapids, Otter Creek, Bruce, Eagle, Richland, Osage, Groveland—Dr. Roy Sexton, Streator.
- Lake County No. 1*, Lake County, exclusive of townships of Benton, Newport, Antioch, Waukegan and Warren—Dr. Chas. Galloway, Libertyville.
- Lake County No. 2*, townships of Benton, Newport, Antioch, Waukegan and Warren—Dr. Fremont C. Knight, Waukegan.
- Lawrence County*—Dr. B. Frank Hochman, Sumner.
- Lee County*—Dr. Edmund P. Owens, Dixon.
- Livingston County*—Dr. James A. Marshall, Pontiac.
- Logan County*—Dr. Frank M. Ewing, Lincoln.
- McDonough County*—Dr. Benj. E. Lemaster, Bushnell.
- McHenry County*—Dr. Ed. V. Anderson, Woodstock.
- McLean County No. 1*, McLean County, exclusive of townships of city of Bloomington, Dale, Bloomington and Allin—Dr. B. F. Elfrink, Chenoa.
- McLean County No. 2*, townships of city of Bloomington, Bloomington, Dale and Allin—Dr. Ernest Mammen, Bloomington.
- Macon County*, exclusive of city of Dactur—Dr. Wm. A. Melton, Jr., Warrenburg.
- Macoupin County No. 1*, Macoupin County, exclusive of townships Shipman, Hillyard, Gillespie, Cahokia, Mt. Olive, Staunton, Dorchester, Bunker Hill and Brighton—Dr. John P. Denby, Carlinville.
- Macoupin County No. 2*, townships of Shipman, Hillyard, Gillespie, Cahokin, Mt. Olive, Staunton, Bunker Hill, Dorchester and Brighton—Dr. Omer F. Allen, Mt. Olive.
- Madison County No. 1*, Madison County, exclusive of townships Godfrey, Fosterburg, Wood River, Alton, Chauteau, Venice, Nameoki and Collinsville—Dr. E. W. Fiegenbaum, Edwardsville.
- Madison County No. 2*, townships of Godfrey, Fosterburg, Wood River and Alton—Dr. Jas. M. Pfeiffer-berger, Alton.
- Madison County No. 3*, townships of Chauteau, Venice, Nameoki and Collinsville—Dr. Robt. W. Binney, Granite City.
- Marion County*—Dr. H. A. Cunningham, Salem.
- Marshall County*—Dr. E. G. Cromwell, Henry.
- Mason County*—Dr. F. J. Corey, Havana.

- Massac County*—Dr. Wm. A. Sim, Jr., Metropolis.
- Menard County*—Dr. H. P. Moulton, Petersburg.
- Mercer County*—Dr. Albert N. Mackey, Aledo.
- Monroe County*—Dr. N. B. Pantler, Waterloo.
- Montgomery County*—Dr. Homer A. Seymour, Hillsboro.
- Morgan County*—Dr. Carl E. Black, Jacksonville.
- Moultrie County*—Dr. John Tonrose Lawson, Sullivan.
- Ogle County*—Dr. Jas. M. Beveridge, Oregon.
- Peoria County*, exclusive City of Peoria—Dr. Wm. W. Cutter, Peoria, R. F. D.
- Perry County*—Dr. George F. Mead, Pinckneyville.
- Piatt County*—Dr. Warren G. McPherson, Bement.
- Pike County*—Dr. W. E. Shastid, Pittsfield.
- Pope County*—Dr. Thos. H. Clark, Golconda.
- Pulaski County*—Dr. Chas. J. Boswell, Mound City.
- Putnam County*—Dr. G. A. McCormick, Hennepin.
- Randolph County*—Dr. W. R. MacKenzie, Chester.
- Richland County*—Dr. Alexis T. Telford, Olney.
- Rock Island County*, Rock Island County, exclusive of Moline, South Moline, Hampton, Zuma, Canoe Creek, Coe, Port Byron and Cordova—Dr. Geo. L. Eyster, Rock Island.
- Rock Island County No. 2*, townships Moline, South Moline, Hampton, Zuma, Canoe Creek, Coe, Port Byron and Cordova.
- St. Clair County No. 1*, St. Clair County, exclusive townships of Stites, Canteen, Caseyville, Belleville and St. Clair and city of East St. Louis—Dr. H. T. Bechtold, O'Fallon.
- St. Clair County No. 2*, townships of Stites, Canteen, Caseyville, Belleville and St. Clair—Dr. E. M. Irwin, Belleville.
- Saline County*—Dr. Jos. V. Capel, Harrisburg.
- Schuyler County*—Dr. J. C. Steiner, Rushville.
- Scott County*—Dr. Geo. M. Straight, Winchester.
- Shelby County*—Dr. Wm. J. Eddy, Shelbyville.
- Stark County*—Dr. Clyde Berfield, Toulon.
- Stephenson County*—Dr. Karl F. Snyder, Freeport.
- Tazewell County*—Dr. H. V. Bailey, Pekin.
- Union County*—Dr. Sidney C. Martin, Anna.
- Vermilion County No. 1*, Vermilion County, exclusive of townships of Danville, McKendree, Georgetown, Elwood, Love, Carroll, Sidell and Catlin—Dr. L. B. Russell, Hoopston.
- Vermilion County No. 2*, townships of Danville, McKendree, Georgetown, Elwood, Love, Sidell, Carroll and Catlin exclusive of City of Danville—Dr. F. N. Odbert, Indianola.
- Wabash County*—Dr. C. F. Brian, Belmont.
- Warren County*—Dr. Chas. P. Blair, Monmouth.
- Washington County*—Dr. O. J. Hagebush, Ashley.
- Wayne County*—Dr. W. C. Sibley, Fairfield.
- White County*—Dr. Frank C. Sibley, Carmi.
- Whiteside County*—Dr. William J. Maurits, Morrison.
- Will County No. 1*, Will County, exclusive of townships of Wheatland, Plainfield, Troy, Joliet and Channahon and city of Joliet—Dr. John F. Courtney, Lockport.
- Will County No. 2*, townships of Wheatland, Plainfield, Troy, Joliet and Channahon, exclusive of city of Joliet—Dr. Earl R. Steen, Joliet.
- Williamson County No. 1*, Williamson County, exclusive of townships of Herrin, Blairville, Carterville and Grasse—Dr. D. D. Hartwell.
- Williamson County No. 2*, townships of Herrin, Blairville, Carterville and Grassy—Dr. Carl Baker.
- Winnebago County*, exclusive of city of Rockford—Dr. Samuel M. Savaga, Shirland.
- Woodford County*—Dr. Charles F. Banta, Eureka.
- City of Aurora*—Dr. W. P. Sherman, Aurora.
- City of Chicago No. 1*, Prec. 1 to 23 incl., 1st Ward—Dr. L. F. McClenathan, LaSalle Hotel.
- City of Chicago No. 2*, Prec. 24 to 44 incl., 1st Ward—Dr. Richard J. Tivnen, Hotel Metropole.
- City of Chicago No. 3*, Prec. 1 to 25 incl., 2nd Ward—Dr. J. H. Stowell, 2633 Indiana Ave.
- City of Chicago No. 4*, Prec. 26 to 49 incl., 2nd Ward—Dr. A. Ralph Johnston, 638 Groveland Park.
- City of Chicago No. 5*, Prec. 50 to 74 incl., 2nd Ward—Dr. H. R. Chislett, 3604 Grand Blvd.
- City of Chicago No. 6*, Prec. 1 to 24 incl., 3rd Ward—Dr. Robert Dodds, 3931 Drexel Blvd.
- City of Chicago No. 7*, Prec. 25 to 49 incl., 3rd Ward—Dr. C. P. Calwell, 4429 Michigan Ave.
- City of Chicago No. 8*, Prec. 50 to 77 incl., 3rd Ward—Dr. H. M. Stowe, 4355 Oakenwald Ave.
- City of Chicago No. 9*, Prec. 1 to 23 incl., 4th Ward—Dr. Edward Papik, 2901 Wallace St.
- City of Chicago No. 10*, Prec. 24 to 41 incl., 4th Ward—Dr. Thomas W. Hagerty, 2876 Archer Ave.
- City of Chicago No. 11*, Prec. 1 to 24 incl., 5th Ward—Dr. Thomas Hughes, 3562 Wallace St.
- City of Chicago No. 12*, Prec. 25 to 47 incl., 5th Ward—Dr. Thomas Hughes, 3562 Wallace St.
- City of Chicago No. 12*, Prec. 25 to 47 incl., 5th Ward—Dr. M. Z. Albrow, 3325 S. Western Ave.
- City of Chicago No. 13*, Prec. 1 to 26 incl., and 87 and 88, 6th Ward—Dr. B. B. Phemister, 5455 Hyde Park Blvd.
- City of Chicago No. 14*, Prec. 27 to 58 incl., 6th Ward—Dr. C. M. Oighton, 5410 Harper Ave.
- City of Chicago No. 15*, Prec. 1 to 31 incl., 6th Ward—Dr. Bertram W. Sippy, 5613 Woodlawn.
- City of Chicago No. 16*, Prec. 1 to 31 incl., 7th Ward—Dr. Henry W. Cheney, 6051 Kenwood Ave.
- City of Chicago No. 17*, Prec. 32 to 66 incl., 7th Ward—Dr. Chas. H. Miller, 6349 Maryland Ave.
- City of Chicago No. 18*, Prec. 67 to 96 incl., 7th Ward—Dr. Weller Van Hook, 7124 Coles Ave.
- City of Chicago No. 19*, Prec. 1 to 22 incl., and 30 to 34 incl., and 56, 8th Ward—Dr. Elmer E. Tansey, 2902 E. 79th St.
- City of Chicago No. 20*, Prec. 23 to 29 incl., and 35 to 55 incl., 8th Ward—Dr. A. W. McLaughlin, 9040 Houston Ave.
- City of Chicago No. 21*, Prec. 1 to 19 incl. and 49 to 57 incl., 9th Ward—Dr. Geo. H. Chapman, 7510 Greenwood Ave.
- City of Chicago No. 22*, Prec. 20 to 48 incl., 9th Ward—Dr. F. A. Maguy, 11511 Michigan.
- City of Chicago No. 23*, Prec. 1 to 12 incl. and 23, 10th



- Ward—Dr. John J. Stoll, 1103 Ashland Blvd.
- City of Chicago No. 24*, Prec. 13 to 22 incl. and 24 to 27 incl., 10th Ward—Dr. E. Cunat, 1714 S. Loomis St.
- City of Chicago No. 25*, Prec. 1 to 19 incl., 11th Ward—Dr. J. J. Kileem, 2024 W. 12th St.
- City of Chicago No. 26*, Prec. 20 to 37 incl., 11th Ward—Dr. A. J. Croft, 1931 W. 22d St.
- City of Chicago No. 27*, Prec. 1 to 27 incl., 12th Ward—Dr. W. E. Miller, 2325 California Ave.
- City of Chicago No. 28*, Prec. 28 to 47 incl., 12th Ward—Dr. Sebastian Stol, 1911 S. Spaulding Ave.
- City of Chicago No. 29*, Prec. 1 to 29 incl., 13th Ward—Dr. Chas. Davison, 2320 Jackson Blvd.
- City of Chicago No. 30*, Prec. 29 to 56 incl., 13th Ward—Dr. M. B. Blouke, 2907 Washington St.
- City of Chicago No. 31*, Prec. 57 to 84 incl., 13th Ward—Dr. James C. Gill, 3545 W. Monroe St.
- City of Chicago No. 32*, Prec. 1 to 30 incl., 14th Ward—Dr. John A. Dawson, 1601 W. Grand Ave.
- City of Chicago No. 33*, Prec. 31 to 60 incl., 14th Ward—Dr. J. H. Walsh, 3200 Washington St.
- City of Chicago No. 34*, Prec. 1 to 30 incl., 15th Ward—Dr. C. F. Roan, 1529 N. California St.
- City of Chicago No. 35*, Prec. 31 to 60 incl., 15th Ward—Dr. J. A. Stevenson, 1658 W. Chicago Ave.
- City of Chicago No. 36*, Prec. 1 to 14 incl., 16th Ward—Dr. Wacław Wawrzynski 2037 N. Robey St.
- City of Chicago No. 37*, Prec. 15 to 33 incl., 16th Ward—Dr. D. D. Coffey, 1261 Noble St.
- City of Chicago No. 38*, Prec. 1 to 4 incl. and 6 and 8 to 11 incl., — Ward—Dr. Henry Harmon.
- City of Chicago No. 39*, Prec. 5 to 7 and 12 to 24 incl., 17th Ward—Dr. M. A. Bingley, 1111 W. Chicago Ave.
- City of Chicago No. 40*, Prec. 1 to 31 incl., 18th Ward—Dr. A. H. Brumback, 1503 Jackson blvd.
- City of Chicago, No. 41*, Prec. 32 to 62 incl., 18th Ward—Dr. J. M. Patton, 336 S. Hoyne Ave.
- City of Chicago, No. 42*, Prec. 6 to 14 incl., and 25 to 28 incl., 19th Ward—Dr. Raul R. Haas, 600 Blue Island Ave.
- City of Chicago, No. 43*, Prec. 2 to 5 incl., and 15 to 24 incl., and 29, 19th Ward—Dr. Ralph Pagano, 831 W. Polk St.
- City of Chicago, No. 44*, Prec. 1 to 13 incl., 20th Ward—Dr. A. M. Oberman, 824 W. 14th St.
- City of Chicago, No. 45*, Prec. 12 to 23 incl., 20th Ward—Dr. Chas. A. Albrecht, 1818 S. Halsted St.
- City of Chicago, No. 46*, Prec. 1 to 34 incl., 21st Ward—Dr. James B. Herrick, 242 E. Walton Place.
- City of Chicago, No. 47*, Prec. 35 to 60 incl., 21st Ward—Dr. Arthur R. Elliott, 746 Lincoln Pk.
- City of Chicago, No. 48*, Prec. 1 to 15 incl., 22nd Ward—Dr. J. L. Eisendrath, 1733 N. Halsted St.
- City of Chicago, No. 49*, Prec. 16 to 34, incl., 22nd Ward—Dr. Wm. C. Craven, 445 W. Chicago Ave.
- City of Chicago, No. 50*, Prec. 1 to 35 incl., 23rd Ward—Dr. J. W. O'Neill, 668 Diversey Pkwy.
- City of Chicago, No. 51*, Prec. 36 to 71 incl., 23rd Ward—Dr. E. D. Howland, 843 Belden Ave.
- City of Chicago, No. 52*, Prec. 1 to 27 incl., 24th Ward—Dr. Carl F. C. Kramer, 1903 Belmont Ave.
- City of Chicago, No. 53*, Prec. 28 to 51 incl., 24th Ward—Dr. John F. Runnels, 1037 Webster Ave.
- City of Chicago, No. 54*, Prec. 1 to 28, incl., 25th Ward—Dr. O. W. McMichael, 3939 Clarendon Ave.
- City of Chicago, No. 55*, Prec. 29 to 56, incl., and 105, 25th Ward—Dr. W. A. D. Montgomery, 4603 Sheridan Rd.
- City of Chicago, No. 56*, Prec. 58 to 85 incl., 25th Ward—Dr. John C. Bryan, 5536 Sheridan Rd.
- City of Chicago, No. 57*, Prec. 86 to 105, incl., and 106 to 11 incl., 25th Ward—Dr. Paul Hullhorst, 6960 N. Ashland Ave.
- City of Chicago, No. 58*, Prec. 1 to 28, incl., and 78, 26th Ward—Dr. M. A. Griffin, 3920 Southport Ave.
- City of Chicago, No. 59*, Prec. 29 to 57 incl., and 78 to 81 incl., 26th Ward—Dr. A. S. Burdick, 2148 Giddings Ave.
- City of Chicago, No. 60*, Prec. 58 to 77 incl., and 82 to 86 incl., 26th Ward—Dr. Duncan McKenzie, 5062 Lincoln Ave.
- City of Chicago, No. 61*, Prec. 1 to 22 incl., and 99 to 106 incl., 27th Ward—Dr. Leon M. Bowes, 6031 Circle Ave.
- City of Chicago, No. 62*, Prec. 23 to 46 incl., and 95 to 98 incl., 27th Ward—Dr. R. R. Ferguson, 3923 N. Keeler Ave.
- City of Chicago, No. 63*, Prec. 47 to 73 incl., and 107, 27th Ward—Dr. Fred O. Bowe, 3000 W. Belmont Ave.
- City of Chicago, No. 64*, Prec. 74 to 94 incl., 27th Ward—Dr. A. F. Paulson, 2938 Diversey Ave.
- City of Chicago, No. 65*, Prec. 1 to 30 incl., 28th Ward—Dr. John E. H. Atkeisson, 1954 Milwaukee Ave.
- City of Chicago, No. 66*, Prec. 31 to 59 incl., 28th Ward—Dr. Wm. J. Anderson, 2303 Milwaukee Ave.
- City of Chicago, No. 67*, Prec. 1 to 31 incl., 29th Ward—Dr. James C. Belsan, 1757 W. 51st St.
- City of Chicago, No. 68*, Prec. 32 to 63 incl., 29th Ward—Dr. I. A. Eberhart, 3524 63rd Pl.
- City of Chicago, No. 69*, Prec. 1 to 23 incl., 30th Ward—Dr. William Parsons, 741 W. 47th St.
- City of Chicago, No. 70*, Prec. 24 to 49 incl., 30th Ward—Dr. W. W. McCleary, 165 W. 47th St.
- City of Chicago, No. 71*, Prec. 1 to 23 incl., 31st Ward—Dr. John S. Hunt, 438 Englewood Ave.
- City of Chicago, No. 72*, Prec. 24 to 47 incl., 31st Ward—Dr. Joseph Reese, 6300 S. Halsted St.
- City of Chicago, No. 73*, Prec. 48 to 73 incl., 31st Ward—Dr. Franklin A. Weatherford, 6302 S. Ashland Ave.
- City of Chicago, No. 74*, Prec. 1 to 27 incl., 32nd Ward—Dr. Guy M. Cushing, 6400 Harvard Ave.
- City of Chicago, No. 75*, Prec. 28 to 57 incl., 32nd Ward—Dr. Chas. F. Weir, 6701 Stewart Ave.
- City of Chicago, No. 76*, Prec. 58 to 85 incl., 32nd Ward—Dr. R. L. Van Dellen, 7100 Emerald Ave.
- City of Chicago, No. 77*, Prec. 86 to 113 incl., 32nd Ward—Dr. John T. Honaker, 1526 W. 103rd St.
- City of Chicago, No. 78*, Prec. 1 to 27 incl., 33rd Ward—Dr. T. J. Conley, 2256 N. Kedzie Blvd.



- City of Chicago, No. 79, Prec. 28 to 62 incl., 33rd Ward*—Dr. J. M. Axelson, 740 N. Laramie Ave.
- City of Chicago, No. 80, Prec. 63 to 92 incl., 33rd Ward*—Dr. C. E. Humiston, 449 N. Central Ave.
- City of Chicago, No. 81, Prec. 1 to 25 incl., 34th Ward*—Dr. George P. Miller, 1230 Independence Blvd.
- City of Chicago, No. 82, Prec. 26 to 53 incl., 34th Ward*—Dr. Jas. A. Clark, 2120 Millard Ave.
- City of Chicago, No. 83, Prec. 54 to 77 incl., 34th Ward*—Dr. J. Zabotsky, 2531 Lawndale Ave.
- City of Chicago, No. 84, Prec. 1 to 32 incl., 35th Ward*—Dr. Elmer E. Henderson, 1852 Humboldt Blvd.
- City of Chicago, No. 85, Prec. 33 to 64 incl., 35th Ward*—Dr. A. A. Whammond, 4359 W. Jackson Blvd.
- City of Chicago, No. 86, Prec. 65 to 90 incl., 35th Ward*—Dr. Frank Chauvet, 726 Crawford Ave.
- City of Danville*—Dr. Thomas E. Walton.
- City of Decatur*—Dr. Everett J. Brown.
- City of East St. Louis, No. 1, Wards 2, 3 and 4, and 1st Prec. of 1st Ward*—Dr. C. F. W. Wilhemy.
- City of East St. Louis, No. 2, Wards 5 and 6*—Dr. Henry A. Cables.
- City of East St. Louis, No. 3, Wards 7 and 8, and 2nd and 3rd Prec. of 1st Ward*—Dr. Wm. E. Wiatt.
- City of Joliet*—Dr. Walter B. Stewart.
- City of Peoria, No. 1, Wards 5 to 8 incl.*—Dr. Leslie Rutherford.
- City of Peoria, No. 2, Wards 1 to 4 incl.*—Dr. Wm. M. Cooley.
- City of Quincy*—Dr. Robert J. Christie, Jr.
- City of Rockford, No. 1, Wards 3, 4, 5 and 7*—Dr. Robert C. Bourland.
- City of Rockford, No. 2, Wards 1, 2, 6 and 8*—Dr. Daniel Lichty.
- City of Springfield, No. 1, Prec. 24 to 54 incl.*—Dr. Don W. Deal, 1001 Williams Blvd.
- City of Springfield, No. 2, Prec. 1 to 23 incl., and 55 to 57 incl.*—Dr. L. C. Taylor, 5th and Washington.

The selection of members of the various exemption boards was made the more difficult on account of the restrictions imposed. The member had to be over thirty-one years of age, had to actually reside in the district in which he served, and could not be selected from among those engaged in, or applicants for, military service. Since many of the prominent physicians of the state are members of, or applicants for, the Medical Reserve Corps of the Army, they could not be considered for exemption board service.

#### CARE OF THE NEWBORN—Continued

as long as we cannot get all our confinement cases into well-established hospitals, but must attend to cases often among ignorant and uneducated people with little or no help, it is necessary and important to give these instructions for the benefit and the welfare of the newborn babies.

#### VACATION HINTS.

It is not enough, by any means, that the place you select for your summer vacation should have attractive scenery, fine bathing, good fishing and an excellent daily bill-of-fare.

While it is true that many keepers of summer resorts have learned that their places must be made safe as well as attractive, there are those who have not learned the importance of sanitation as a factor in making their resorts popular and profitable. So, then, the place you select for your vacation time should, first of all, be a safe place. If it belongs in this class the water supply will be of proven purity; from a deep-driven well, remote from any possible source of pollution and thoroughly protected from surface drainage.

The toilet facilities will be safe by having the out houses and vaults completely screened so that flies cannot have access to them. And, of course, there will be no flies in the dining room and sleeping chambers will be protected against both flies and mosquitoes. There will also be daily removal and sanitary disposition of all waste and refuse, either by incinerator or by burying, and no sewerage will be drained into the places used for bathing.

The above are the things you should note, and unless you find them satisfactory, don't tarry, but find a place that meets these important requirements. Better be safe than sorry.—*Bulletin Chicago School of Sanitary Instruction.*

---

Slight small injuries and they'll become none at all.

---

A good deed is never lost. He who sows courtesy reaps friendship, and he who plants kindness gathers love.

---

Be not simply good—be good for something.

---

If you are bound to say anything mean, talk to yourself.

---

Give every man thine ear, but few thy voice. Take each man's censure, but reserve thy judgment.

---

Trouble knocked at the door and hearing a laugh within hurried away.

---

#### HOUSE OF DELEGATES—Continued

Dr. Gilmore: As a matter of fact, the matter would have to come through the Medico-Legal Committee and could come in no other way. If I may, I will change that motion to read that the matter be referred to the Council with power to act upon recommendation of the Medico-Legal Committee.

A motion to adjourn was then seconded and carried.

ADJOURNMENT.

## ILLINOIS STATE MEDICAL SOCIETY.

## OFFICIAL MINUTES OF THE SIXTY-SEVENTH ANNUAL MEETING

HELD AT BLOOMINGTON, MAY 8-10, 1917.

## MINUTES OF MEETING OF HOUSE OF DELEGATES

*Tuesday Evening, May 8, 1917.*

The meeting was called to order at 8:00 p. m. by the president, Dr. William L. Noble, in the blue lodge room of the Masonic Temple, Bloomington, Ill.

The Chairman: The House of Delegates of the Illinois State Medical Society will please come to order.

The first order of business is the report of the Committee on Credentials. I will call on the secretary, Dr. Gilmore, for the report.

The Secretary calls roll according to county.

You have heard the report of the Committee on Credentials; what is your pleasure, gentlemen?

Motion to accept the report is made, seconded and carried.

The next order of business is the roll call. The Secretary will read the call of the roll.

Secretary calls roll.

A quorum of the delegates being present, the House of Delegates of the Illinois State Medical Society is now declared open for business. The next order of business will be the reading of the minutes of the last meeting by the Secretary.

Motion to dispense with the reading of said minutes but to approve them as published in the ILLINOIS MEDICAL JOURNAL is made, seconded and carried.

The next is the report of the Secretary, Dr. Gilmore. Dr. Gilmore reads report.

## SECRETARY'S REPORT.

*Gentlemen of the House of Delegates:*

Your Secretary begs to report the collection of the following amounts from all sources for the fiscal year of 1916 and for the first four months of 1917:

	Year 1916	Jan.-Apr. 1917		Year 1916	Jan.-Apr. 1917
Adams ....	\$ 135.50	\$ 125.00	Fayette ...	27.50	20.00
Alexander .	55.00	52.50	Franklin ..	75.00	12.50
Bond .....	....	....	Fulton ....	181.50	20.00
Boone ....	40.00	45.00	Gallatin ...	40.00	31.50
Browne ...	9.50	17.50	Green ....	72.50	82.50
Bureau ...	60.00	67.50	Grundy ...	30.00	....
Calhoun ...	2.00	....	Hamilton .	27.50	7.50
Carroll ...	55.00	57.50	Hancock ...	53.00	52.50
Cass .....	55.00	2.50	Hardin ...	5.00	5.00
Champaign.	178.00	120.00	Henderson..	27.50	....
Christian ..	158.50	....	Henry ....	100.00	85.00
Clark .....	50.00	7.50	Iroq's-Ford.	195.50	167.50
Clay .....	36.50	12.50	Jackson ...	50.00	78.00
Clinton ...	31.25	1.00	Jasper ....	17.50	20.00
Coles-Cum..	60.00	60.00	Jefferson ..	77.50	68.50
Cook .....	6,572.50	5,000.00	Jersey ....	25.00	10.00
Crawford .	62.50	60.00	Jo Daviess..	62.50	52.00
De Kalb ..	67.00	70.00	Johnson ...	27.50	....
Dewitt ....	1.00	....	Kane .....	227.50	232.50
Douglas ...	52.50	52.50	Kankakee .	110.00	97.50
Edgar ....	60.00	60.00	Kendall ...	20.00	7.50
Edwards ...	20.00	17.50	Knox .....	120.00	102.50
Effingham .	65.00	65.00	Lake .....	136.50	50.00

	Year 1916	Jan.-Apr. 1917		Year 1916	Jan.-Apr. 1917
La Salle...	412.50	8.50	Pulaski ...	30.00	30.00
Lawrence .	30.00	....	Randolph ..	45.50	45.50
Lee .....	122.00	37.50	Richland ..	17.50	2.50
Livingston..	64.50	95.00	Rock Island	160.50	78.00
Logan ....	37.50	22.50	Saline .....	45.00	....
Macon ....	140.50	....	Sangamon .	290.00	....
Macoupin .	116.00	112.50	Schuyler ..	17.50	15.00
Madison ...	225.50	220.00	Scott .....	10.00	....
Marion ...	150.00	2.50	Shelby ....	50.00	25.00
Marsh'l-Put.	50.00	65.00	Stark .....	15.00	12.50
Mason ....	52.50	....	St. Clair...	268.50	185.00
Massac ...	37.50	35.00	Stephenson.	121.00	120.00
McDonough.	92.50	....	Tazewell ..	74.50	52.50
McLean ...	220.00	237.50	Union .....	37.50	42.50
McHenry .	100.00	55.00	Vermilion .	160.00	275.00
Menard ...	37.50	5.00	Wabash ...	42.50	37.50
Mercer ...	52.50	42.50	Warren ...	57.50	55.00
Monroe ...	85.00	....	Washing'n..	40.00	32.50
Montgmy..	96.50	135.00	Wayne ...	36.00	32.50
Morgan ...	145.00	2.50	White .....	45.00	45.00
Moultrie ..	20.00	27.50	Whiteside .	70.00	30.00
Ogle .....	77.50	22.50	Will .....	67.50	170.00
Peoria ....	335.00	142.50	William'n .	97.50	....
Perry .....	42.50	4.00	Winneb'o .	179.50	150.00
Piatt .....	5.00	70.00	Woodford .	51.50	52.50
Pike .....	98.50	56.50	Subscrip'n .	50.05	12.00
Pope .....	5.00	....	Exhibits ..	860.00	235.00

A total for the fiscal year of \$15,325.80 and for 4 months of the current year \$10,230.50.

During the fiscal year the Society expended \$17,166.64, of which sum \$13,489.87 was for the running expenses of the Society and the JOURNAL, and \$3,676.77 for medical defense. For the first four months of the current year a total of \$12,029.15 has been spent, \$8,109.58 for general expense and \$3,919.51 for the expense of the Medico Legal Com.

The membership of the Illinois State Medical Society May 1, 1916, was 6,091. Since that report 647 new members have been added, 261 reinstated, 692 dropped and 31 have died, leaving a net gain of 185 members, the membership May 1, 1917, being 6,276. Despite warning, the county secretaries, giving notice through the JOURNAL and talking about the matter at every meeting of the Society, there are always about 500 members who insist on being dropped from membership before they will pay their dues, and when they do pay up usually getting the money to the secretary of their society just before the end of the current year and then becoming in arrears a few weeks later, only to be dropped again. This makes an unnecessary expense in managing the JOURNAL, but it seems impossible to correct the trouble.

The Coles and Cumberland County Medical Societies with the consent of their Councilor and the Council, have formed another hyphenated society. This I think was a wise move and one that should be followed by a number of weak societies. It is decidedly unfair to deprive live members of the State Society from County Society Fellowship simply because they happen to live in a thinly settled district where a society of 3 to 5 members is kept alive with difficulty. In the past every effort was made to have an organized society in every county, but the movement has not been a success. Indeed about the only



advantage was to increase the number of country votes in the House of Delegates.

The principal activities of your Secretary for the past year have been directed to attending the duties of a member of the Illinois Committee on Medical Preparedness. Early in 1916 this committee was formed and consists of 7 men appointed by the National Committee and the President and Secretary of the State Society ex-officio. Your Secretary has attended some 10 meetings of this committee and feels that it has been decidedly worth while. The first work done was to select the names of 1,500 members of the Society who might be called upon to act as medical officers in an emergency. This list was sent to the War Department and applications forwarded to the members suggested. Members of the various county societies have been selected to act as a Red Cross Committee in their respective localities, and within the last few weeks an Auxiliary Defense Committee has been organized in every county in the State. The organization of this committee was the most satisfactory co-operation your secretary has ever had from the component societies. Within three days from the time the notice left my office these committees had been named in 70 counties and the work was practically complete in ten days. I feel certain that no State in the Union can show a better record.

The increase in the Medical Officers' Reserve Corps of the United States Army being very slow, the State Committee was instructed by the Council of National Defense to appoint a committee of two or more of their number to go out over the State, receive applications and hold examinations for membership in this organization. This action was taken, the committee voting to act as a whole. The State was divided into five sections and examinations have been held in about twenty different cities. Again the secretaries of the component societies were alive and co-operated with the State Committee in every way possible. In only one instance did one of the examiners receive a cool reception. When he called on the Secretary of the Society in the county where the examination was to be held he found that the notice of the examination had been carefully pigeon-holed and the request for publicity had been ignored. Needless to say no applications were received at that point.

There are two counties in the State that have no county medical society. The reason? Dead secretaries. We have reason to hope, however, that in the very near future they will take on new life.

Your Secretary has attended every meeting of the Council and the usual number of local and district medical societies.

Respectfully submitted,  
W. H. GILMORE,  
Secretary.

You have heard the very favorable report of your Secretary; what is your pleasure?

Dr. Betz of Cook: I may be a little bit dense, but in the Secretary's reading of the different counties in the State, he passed over it so fast that I couldn't

get just the drift of it. How much money is there due from these other counties in the State?

The Secretary: They have to the 31st of December to pay it, you know, Doctor. I haven't figured it.

Dr. Betz: Your report is only partial then?

The Secretary: The first part is for the fiscal year according to the law. The law also calls for a partial report covering the first four months of the current year and those were the first figures I read.

Dr. Betz: How much money did you say was expended for our JOURNAL?

The Secretary: That was for everything, doctor. I will read the information in just a minute. \$17,166.64, of which sum \$13,889.70 was for the entire expense of the Society, including the JOURNAL, balance for medical defense.

Dr. Betz: We have always had a little contention on that STATE JOURNAL and I just wanted to know whether it was a paying proposition or not. Are there any salaries paid?

The Secretary: They will all be taken up in the Chairman's report of the Council.

The Chairman: What is your pleasure with regard to the report of the Secretary?

Motion to adopt report is made, seconded and carried.

The next order of business will be the report of the Chairman of the Council, Dr. C. D. Pence.

#### REPORT OF THE COUNCIL.

Dr. Pence: *Mr. Chairman, Ladies and Gentlemen:*

It is my official duty as chairman of your council to read to this House of Delegates the annual report of your council's work during the past year.

The Council during the year has held five business sessions; the first, for organization, in Champaign, directly after the last annual meeting, others in June, October and April in Chicago, and one in Bloomington in January.

At the organization meeting held in May the following gentlemen were elected or appointed to the various positions in the Council:

Chairman of the Council—Clyde D. Pence.

Secretary—W. H. Gilmore.

Finance Committee—Drs. Windmueller, Arp and Price.

Publication Committee—Drs. Nelson, Sibley and Gillespie.

Advertising Committee—Drs. Center, Arp and Gillespie.

The actions of the Council for the past year have been more voluminous than on previous years, owing to more work done by several of your committees, namely: the Medico-Legal Committee, the Compulsory Health Insurance Committee, the Medical Preparedness Committee and the Legislative Committee. These committees have never before been so active nor never accomplished so much. It has been the business of the Council to assist, counsel with and finance them. The thanks of this House of Delegates and of each member of the Society are due every member of these committees. It is not our purpose to report for these



committees, but we would call attention more in detail to their activities.

The *Compulsory Health Insurance Committee* was a new committee appointed by your president. The question of health insurance has been a hard fought one in several states. The results of this committee's work have been published in the JOURNAL. It investigated health insurance both from a negative and affirmative viewpoint, securing data of Compulsory Health Insurance from most of the foreign countries of the world. Reprints of this compilation and analysis have been sought from many states and foreign countries. The work of the committee has been far reaching, and is a credit to this Association.

*Medico-Legal Committee.* The ever increasing malpractice suits have kept your Medico-Legal Committee busy. All things considered it is remarkable that more judgments have not been assessed. The fact that no more judgments have been obtained is due to the continued and persistent efforts of your committee.

Last year in our report to the House of Delegates we referred to the survey of Indemnity Insurance made by this committee. Up to this time no action has been taken. We are convinced the Society should take up this matter and work out a plan of indemnity insurance against malpractice suits, and also select a plan of handling other forms of insurance for our members, such as accident, automobile, fire and theft. Insurance in its various forms is of no small moment to the members of our association.

*Medical Preparedness Committee.* The work of this committee has come about because of the war situation. The work has been carried on in conjunction with the National Preparedness Committee, and has fallen largely upon your President and Secretary, both of whom have given it a considerable amount of time and work.

*Legislative Committee.* Your Legislative Committee has been at work on legislative matters almost continually since the convening of the present legislature. So far as we know there has never been a year in which the work of the committee has been so heavy nor in which the work of this committee has been so successful. Your thanks are due especially to your president, Dr. W. L. Noble, for his most attentive service. You are aware of the results so far obtained.

THE JOURNAL. It has indeed been a difficult year for state medical journals. Those journals whose only revenue is from advertising have gone through one of the most trying of years. The European war practically stopped the importation of drugs, surgical instruments, surgical appliances, and medical and surgical supplies. Each of these lines has always maintained lucrative advertising. The American houses have almost universally had more business than they could handle. This condition has nearly eliminated these sources of advertising. In consequence of this condition of trade, the advertising of the JOURNAL diminished very markedly during the first half of the year.

Our contract for paper expired with the June issue.

Since that time no contract could be secured which looks attractive. Paper advanced rapidly and steadily, until the cost of our paper stock was considerably more than doubled. I wish to state here that our publishers, Messrs. Rogers & Hall of Chicago, have at all times endeavored to reduce the paper cost, and have assisted in making the cost as low as it has been. The outlook for the paper market is, from our standpoint, a little better at this time.

The Advertising Committee has given much time in securing other lines of advertising, and at the present time our advertising is on a better basis than ever. How long this condition continues will depend upon the commercial status of affairs during the next year. The outlook at the present time for vigorous campaigns of advertising is not at all flattering.

#### Cost of publishing the JOURNAL:

June, 1916.....	\$ 503.80	
July, 1916.....	661.31	
August, 1916.....	649.64	
September, 1916.....	583.20	
October, 1916.....	665.96	
November, 1916.....	700.38	
December, 1916.....	771.09	
January, 1917.....	736.22	
February, 1917.....	725.59	
March, 1917.....	734.20	
April, 1917.....	715.88	
May, 1917.....	716.19	\$ 8,163.46
<hr/>		
Editor's salary.....	\$ 900.00	
Managing editor's salary.....	720.00	
Commissions on advertising.....	902.38	
Postage, approximately.....	800.00	
Globe Engraving Co.—cuts.....	18.96	
Stenographer .....	570.00	3,911.34
<hr/>		
Total .....		\$12,075.80
Income from JOURNAL:		
From advertising, cash.....	\$ 8,288.66	
Bills receivable (notes).....	30.00	
Uncollected accounts for year which are the running accounts and are good...	1,393.09	
<hr/>		
		\$ 9,711.75
Transferred to Treasurer Markley.....		7,350.00
Total cost of JOURNAL.....	\$12,075.80	
Income of JOURNAL.....	9,711.75	
Excess of cost over income.....	2,364.05	

A more accurate placing of stenographer's salary and subscriptions would easily reduce the shortage to \$2,000. This would show the JOURNAL to cost each member about thirty-one cents for the past year, or less than three cents per copy.

In this report the entire time of the stenographer is charged to the JOURNAL. This is not quite correct as the time is largely given to general matters of the Society. Also, there are a number of cash subscriptions which go directly into the general fund, and these should be credited to the JOURNAL. These items properly placed would credit the JOURNAL a few hundred dollars more.

We have made no account of a few uncollected accounts which are doubtful or impossible of collection.

*Treasurer.* The Treasurer's report will show the best condition it has shown in several years. The balance this year is on the right side.

*Membership.* The total membership to date is 6,276, making a gain of 185 for the year.

We believe that in no year does the history of the Society show so much activity in so many ways as shown this year. The general condition of the Society is good.

The Chairman: You have heard the report of the Chairman of the Council; what is your pleasure?

Motion to adopt report is made, seconded and carried.

The next is the report of the Treasurer, Dr. Markley.

Treasurer reads report.

REPORT OF DR. A. J. MARKLEY,  
Treasurer Illinois State Medical Society.

From May 15, 1916, to June 8, 1917.

Balance May 15, 1916.....	\$ 1,843.70
Received from W. H. Gilmore.....	11,512.35
Received from ILLINOIS MEDICAL JOURNAL..	7,350.00
Received, miscellaneous .....	5.79

Total .....	\$20,711.84
Vouchers cashed .....	17,072.41

June 8, 1917, balance on hand.....\$ 3,639.43

REPORT OF DR. A. J. MARKLEY,  
Treasurer Medico Legal Defense Fund.

From May 15, 1916, to June 8, 1917.

Balance, May 15, 1916.....	\$14,646.97
Received from W. H. Gilmore.....	6,787.00

Total .....	\$21,433.97
Vouchers cashed .....	9,437.57

June 8, 1917, balance.....\$11,996.40

You have heard the report of the Treasurer; what is your pleasure?

Motion to adopt report is made, seconded and carried.

We will now listen to the report of the Councilors. First I will call on Dr. Emil Windmueller of Woodstock, first district.

Dr. Windmueller: I haven't any report to offer—that is, any written report—because there hasn't been anything doing in our district that has called for my office. In fact, the things up there have been entirely too harmonious and euphonious to call for my services, but I have been in all the counties in the district during the past year. I believe all the societies of the district have paid their annual dues; are all in good standing.

At the meetings I have attended I have as usual had conjoint meetings and we have held three or four of these in the district. The last joint meeting was held at Freeport and that included all the counties of the first district except Kane—I believe they were forgotten by mistake—and the members from Stephenson county had jumped across the state line into Wisconsin

and taken all the border counties of the state of Wisconsin, and across the Mississippi river and invited the counties in Eastern Iowa.

That meeting, held in Freeport, September 26, had an attendance of some two hundred eighty-four, lasted two days and was a very successful meeting.

In point of membership we have made a gain of eighteen new members and there are some still to be heard from that are delinquent.

I believe that about covers my report. We have in our district some very active societies, especially those of Kane and Winnebago and Stevenson counties, and I will say for the latter county, it is the most active county I know of anywhere.

The Chairman: I will call on Dr. Edwin S. Gillespie of Wenona to report for the second district.

Dr. Gillespie: *Mr. Chairman, Ladies and Gentlemen of the House of Delegates:* Just before I read my report I want to say one word about the Tri-State District Medical Society, which Dr. Windmueller spoke about at Freeport. I attended that meeting last September and in the ten years I have attended medical meetings I have never attended one where I had such a good time as there.

The next meeting is to be at Dubuque, Iowa, and I hope I will see every man there who is here tonight. If you come you will have a good time.

Dr. Gillespie reads his report.

COUNCILOR REPORT, SECOND DISTRICT.

*Mr. President and Members of the House of Delegates:* Your Councilor of Second District wishes to report that the year just past has been an unusually successful one. The same number of county meetings were held in the various counties. The membership shows a net gain of about 14 members. We have lost some members because of non-payment of dues and some by death, but the new members have more than compensated the loss.

I will not tire you with a detailed report of each county, as the Secretary has just finished reading such a report, but I am going to mention one thing I have observed this year, I believe the tendency for the members of each county society to furnish their own program is growing. The man that writes a paper is the man that gets most out of it. So when you invite outside talent to furnish your program, you are forfeiting your right and privilege to study and perfect yourself in some phase of medicine. Try working up a paper and when the Secretary calls on you for a paper, have the paper ready and read it. The Secretary will be glad to use home talent if he can get it. I sincerely hope that the time will shortly come when the members will furnish at least 90 per cent. of the programs of their Society. When the Secretary can depend on his own members the attendance will always be excellent.

During the past four months two things happened in the Second District that were a little unpleasant and needed attention. One was in Bureau county, whose normal membership is about forty. During January Dr. Gilmore wrote me that only 17 were in



good standing. I promptly visited this county to see the Secretary and find out if possible what was the trouble. The trouble was that the Secretary was a new man who had always paid his dues promptly and didn't know that the Secretary is forced in most cases to go and get the money. As soon as this Secretary learned what was required the work was done. This county is in excellent financial condition and the Secretary is a good secretary. And right here, I wish to repeat a thing I said in my report last year. Choose your secretaries with extreme care.

The other unpleasantness happened in Kendall county and was a plain case of man neglecting to pay his dues until he was dropped for non-payment of dues and then wanted to shift the blame to someone else. This member, however, paid his dues and so far as I know everything is affable again.

Your Councilor has attended all of the Council meetings—three in Chicago and one here in Bloomington in January. At the October meeting I was made a member of the Advertising Committee with two other members of the Council, and a lot of my energy and spare time have been taken up securing advertising matter for the JOURNAL in order to keep ahead of the increased cost of production.

We did secure considerable new advertising, and while some of this advertising was not what we wanted to get, it was the best we could do. There are many obstacles in the way of securing good, clean advertising that we would like to have, that many of the delegates know nothing about. However, with all our efforts to make the JOURNAL pay for itself we failed.

There is one field of labor in which I feel sure our Society has made long strides, and that is in the legislative work. The Legislative Committee were very well pleased with the co-operation they received in the past sixty days from doctors all over the state. Many things have been accomplished at Springfield recently that would have been impossible a year or two ago. I sincerely hope we can continue our good work until we become as efficient as the lawyers and farmers.

Respectfully submitted,

COUNCILOR, 2ND DISTRICT.

The Chairman: The next report will be from Cyrus E. Price, of Robinson, Councilor from the Eighth District.

Dr. Price reads his report.

#### COUNCILOR'S REPORT OF EIGHTH DISTRICT

Your Councilor of the Eighth Councilor District begs first to say that I have attended all the Councilor meetings of the year and further say that I am in close enough touch of the different county societies of my district to know that the most of them are in good to fair working order. Possibly Jasper county being the one with the least interest, for they have only had one or two meetings during the year.

Quite a few of the counties that formerly met bi-monthly are now meeting every month, and find that the members take more interest.

I have also found that it is a good plan in the County Society to have a program made by a program committee for the entire year and one mailed in a convenient pamphlet form to each member of the county. This causes them to take more interest, and each one knows well in advance what his subject is and when his time comes on the program.

I am sure the oftener we meet the better acquainted we become, the more good we see in each other, and the more eager we are to meet again. I have visited four counties on invitation. First was Lawrence county, where they have a fair society, a good young secretary who will make good.

Next I visited Cumberland county, where there are only five men, with a probable sixth man who would become members of any society under any circumstances. These five men realized they could not maintain a county society, but were willing to affiliate with some other county. Coles county being the most available one, such arrangements were made, and it is now the Coles-Cumberland Society. On visiting this society later in Mattoon I was very much gratified with the results of the affiliation.

I later visited Clark county, which has a splendid society that has adopted the monthly meeting.

We have lost two members by death, Dr. Montgomery of Charleston and Dr. Glidden of Danville.

We have a few reinstated and several new members.

On the whole, I consider the counties in the district in good working order.

Respectfully submitted,

C. E. PRICE,  
Councilor.

(Applause.)

I will call on Dr. Charles S. Nelson, of Springfield, the Fifth District.

Dr. Nelson reads his report.

#### COUNCILOR REPORT, FIFTH DISTRICT.

*Mr. President and Gentlemen of the House of Delegates:* Your Councilor from the Fifth District begs leave to say that the Fifth District, so far as membership, interest, etc., are concerned, is about on a par with my report last year. This district is composed of nine counties, and I have received a detailed report from all of them, and in the aggregate they show an increase in membership about sufficient to cover loss from death, removals and lapses. There are nineteen new members reported, five deaths, six removals and twenty-three lapses. I am assured, however, by the secretaries, that nearly, if not all the lapsed members will be reinstated, and if so, the district will show a small increase in membership.

As far as I can learn, there are only about 40 or 50 eligible physicians living in the Fifth District who are not members of their respective county societies. While I admit that these 40 or 50 should be enrolled, still a membership of over 400 in good standing, goes to show that the Fifth District is pretty well organized.

I have received and accepted invitations from two societies during the past year, although I have visited



every county in the district. This has been no expense to the State Medical Society, as it has been done in conjunction with my work for the State Board of Health.

I have attended every meeting of the Council during the year, and in common with the other members of the Council, have tried to conserve the best interests of the State Medical Society. The war and high cost of living, has also given your Council some unusual problems to solve, as explained by the Chairman of the Council, and in trying to solve these problems, if any act of your Councilor from the Fifth District, either by voice or vote, has given rise to criticism, he assures you that his every act has been done with an eye single to the best interests of the Illinois State Medical Society, according to his best judgment.

Respectfully submitted,

C. S. NELSON,  
Councilor, Fifth District.

(Applause.)

I will call on Dr. Clyde D. Pence of Chicago to report for the Third District.

Dr. Pence reads his report.

#### COUNCILOR REPORT, THIRD DISTRICT.

*Cook County Society* comprises the main or parent society of Chicago and its fifteen component branch societies. All of these societies, both county and branch, are in good condition. There are too many eligible physicians in Cook, who are not members, although a rather large number have been added to the Society this year. The membership at present is 2,386, with a rather large number dropped for non-payment of dues—the majority of whom will probably reinstate. We have no list of non-members, consequently do not know the exact number.

*Lake County.* Lake County Society, one of the live societies, generally speaking, has a membership of forty-nine. It has lost by death this year, two members; through delinquency, three, whom we hope to see reinstated, and through removal, four. Five new members have been added. There are but fifteen practicing physicians in the county who are not members, of whom but seven are eligible for membership.

*Kankakee County.* Kankakee County Society also has forty-nine members in good standing. There are twenty-five physicians in the county who are not members. The membership has fallen by two. A large portion of the twenty-five non-members should be induced to join the Society.

*Will County.* The counters of the Third District apparently are strong for forty-nine. Will county also has forty-nine members in good standing. Thus the three counties outside of Cook have forty-nine members each. I have no list of physicians in Will county who are not members, but thirty is the approximate number. I have no mortality list for the county.

(Applause.)

Dr. Charles F. Burkhardt, of Effingham, will report for District No. 7.

Dr. Burkhardt: *Mr. Chairman, Members of the House of Delegates:* I have no formal or written re-

port to make because as Councilor of the Seventh District it has really been impossible for me to make a report in detail for the reason that I have only received a report from one county in my district, that county being Clinton. If the county secretaries would make the usual report to the Councilor, we would be in better position to make these reports, but briefly I will say that I believe that the Seventh District is in about as good condition as usual.

We have some few counties in the district that are rather sleepy, and I had one, I believe, that was rather in a dying condition, very nearly dead, and I succeeded in helping to revive it with the aid of some faithful members in the county.

I, as Councilor, have attended all Council meetings this year, as I have always attended since I have been a Councilor, and I have used my best efforts to try and conserve the funds of the Society.

I don't think there will be much change according to my judgment, in the membership of the Seventh District, and I want to say that we have possibly as good average territory in the Seventh District as anywhere in the State for the reason that it is composed both of Egypt and Central Illinois.

The Chairman: Dr. Sibley is not present. Dr. Arp is not present. Dr. Charles D. Center of Quincy is absent on account of military duty. He is guarding bridges, as the newspapers report, "somewhere in Illinois."

What is your pleasure with regard to the report of the members of your Council, of the work in their respective districts?

Motion to accept reports is made, seconded and carried.

The next order of business will be a report from the Medical Legislation Committee, Dr. Eberhardt, Chairman of the Legislative Committee of the State. Dr. Eberhardt reads report.

#### REPORT OF COMMITTEE ON MEDICAL LEGISLATION.

Your Committee on Medical Legislation begs to submit the following report:

Soon after the committee was elected a meeting was held in Chicago for the purpose of organizing and planning the year's work.

In addition to the three members of the committee, the President of the Society was also present. It was decided that the work could be accomplished more effectively by having a secretary, as well as a chairman, and Dr. Don Deal was elected secretary of the committee.

It was decided to card-index the physicians of the State under each senatorial district for convenient reference. This was accomplished and has been of great value where it was necessary to reach members of the profession in a particular district in a hurry.

As in the past, we have been hampered by the apathy of the profession on legislative matters. A large number of medical men neglected answering our letters, making it necessary to write hundreds of additional personal letters to individuals in the State. In

all, more than fifteen thousand letters were sent out and after five months of correspondence we were able to complete a list of family physicians of each senator and representative. In many instances we had in addition a list of friends of the legislator, some of whom lived at a considerable distance from him.

We also knew the attitude of every senator and representative toward organized medicine and in that manner had a poll of the situation. We had the Springfield address of each member of the House and Senate.

Before the primaries the attention of the profession was called to the records of those candidates for reelection, who had stood for or against organized medicine and also the attitude of those who had no previous records to go by.

At the time of the election no action was taken, in those districts where the selection of certain men was a foregone conclusion. In districts where it was believed something might be accomplished, letters were sent out in accordance with the attitude of the candidate and many of the members of the profession were also notified by telephone. Some direct gain was accomplished by this method and a great deal of indirect benefit resulted from the knowledge that the profession was active.

It is desirable that the profession should take a sufficiently active part in these matters that the endorsement of organized medicine will be sought by the candidates. Continued effort along this line is certain to bring results. The activity of the cults this year is the result of preparedness extending over a number of years, such for instance as the osteopaths. They employ a capable Chicago attorney who was in almost daily attendance during the time of the sessions.

They showed great interest and activity and the membership of their legislative committee really consisted of four hundred and fifty osteopaths, which is their entire enrollment. Their members saw the legislators in their home districts at each week end. At the general hearing before the Judiciary Committee the galleries were filled with sixty-five per cent. of the membership of their state society. On the medical side, there were exactly twenty-two M. D.'s in attendance and most of them were from Springfield, or the surrounding district. We must awaken and perfect a better organization if we are to hold our ground in the future. An osteopath said that they were just beginning and intended to appear before the legislature every year with greater requests.

We found it necessary to watch several bills which were introduced and to follow them to their end. Every day the House bulletin was carefully gone over and each of the many hundred bills introduced during the session was read by title for fear it might include matters affecting the medical profession.

House Bill 176 (Chiropody). It was a very bad bill and finally the chiropodists were induced to withdraw it and introduce Senate Bill No. 266, which was satisfactory to us and in fact was practically written by Dr. Drake. It was followed through in order that objectionable amendments might be defeated.

House Bill 198 and Senate Bill 151, relating to eugenic marriages, were watched with interest. They were both defeated in the committees. We took no active part in these bills.

House Bill 266, which was introduced by the osteopaths and would have given them the right to practice medicine and surgery in all their branches, was withdrawn as a direct result of the introduction of our own House Bill No. 657.

At first it was our intention to introduce a bill to amend our old Medical Practice Act, which would make it fit in with the new administrative code and at the same time give the osteopaths what they claimed they wanted. That is, Protection from the cults that were coming on by the thousands, without any preliminary or professional educational requirements whatever.

Mr. Woodward, who wrote the Consolidation Bill for the Governor, was selected to write our bill. He gave as his opinion that the present Medical Practice Act was in very doubtful form and it was practically impossible to amend it in a manner that would give us the desired changes.

After consulting with Dr. Noble and Dr. Drake it was deemed advisable in view of the recommendation of Mr. Woodward, that an entire new Medical Practice Act be introduced, since osteopaths had already opened up for attack, the existing Medical Practice Act. Mr. Woodward was instructed to prepare the same, which he did and the bill now before the legislature has been pronounced by those competent to pass judgment, the best Medical Practice Act in America.

So we have now, House Bill No. 657, which has been followed through three hearings before the Judiciary Committee of the House and through two readings on the floor of the house. It is now on third reading and is expected to pass the House this week and the Senate next week and be in the Governor's hands the following week.

Other kindred bills, such as Senate Bill No. 28 (Public Health Districts), Senate Bill No. 8 (Dispensaries), House Bill 300 (Forgery), Senate Bill No. 128 (Insanity Commission), and House Bill No. 575 (A bill to amend the Dental Practice Act) were all followed through the legislature.

House Bill No. 685, which was introduced by Mr. Burns, was intended to strike at the work of Mrs. Sanger, but incidentally would have been very drastic against the medical profession, in several particulars. We appeared before the House Judiciary Committee and feel that the bill, through our influence, will either be killed or amended so that the medical profession will not be included.

We had two hearings on House Bill No. 279, which was the Consolidation Bill and feel that the public and the medical profession are in wonderfully improved positions, as the result of this splendid piece of legislation. As the result of the combination of the Consolidation Bill and of our House Bill No. 657, we feel sure that Dr. Drake is to organize a new depart-



ment of health that will be superior to any similar organization in the Union.

With the new Department of Education and Registration we feel that an epoch has begun in the administration of the Medical Practice Act.

We were prepared to fight the Social Insurance Bill, which was not introduced. We feel that the active opposition of the medical profession prevented its introduction.

A step is taken towards its introduction next year by Senate Bill No. 348, which provides twenty thousand dollars for expenses, and creates a board to investigate Social Insurance. The committee to consist of representatives as follows: Labor, two; Employer, one; Physicians, one; Farmer, one; Economist, one; Social worker, one, and two other members.

In view of the importance of this matter to the medical profession and because of the heavy burden that will fall upon us, we believe the physicians should be represented upon this board by more than one member, and an attempt will be made to so amend it.

We feel that the work of the Legislative Committee has never been more strenuous than at this present session and that if it were not for the splendid cooperation of many members of our State Society and the generous allowances made by the Council, we would have had some very vicious legislation in the State.

Copies of the bills affecting the medical profession have been mailed to the officers and councilors of the Society as they have been introduced. It is suggested that county societies and individuals subscribe for sets of these bills so that they may be in constant touch with the legislative work. Such sets could be furnished at a cost of five dollars per session with a profit to the committee, which would give it an increased income to take care of some of its work and at the same time, and of greater importance, it would keep the county societies posted so that their members could intelligently discuss these bills with their legislators during their week ends, because it is by this method that the doctors can really influence their representatives.

We can say that so far no objectionable legislation has been spread upon the statutes and that a great benefit has resulted to the public and to the profession through the action of the Fiftieth General Assembly.

Respectfully submitted,

MEDICAL LEGISLATION COMMITTEE.

NOBLE M. EBERHART, Chairman.

D. W. DEAL, Secretary.

E. P. SLOAN.

(Applause.)

You heard the report of the Legislative Committee of our Society; what is your pleasure?

Motion is made to accept the same and refer it to the council. Motion is amended to include a vote of thanks to the Legislative Committee and especially to the President, for constant attention, which amendment is accepted and the motion is carried.

The next will be the report from the Medico-Legal Committee, C. Bruce King, Chairman.

Dr. King reads his report.

#### REPORT OF MEDICO-LEGAL COMMITTEE.

*Mr. Chairman and Members of the House of Delegates. Gentlemen:* Your committee begs leave to submit the following report. There was pending on May 1, 1916, 55 cases, as follows:

Appellate Court of Illinois.....	2
Superior Court of Cook County.....	22
Circuit Court of Cook County.....	12
Municipal Court of Chicago.....	3
Circuit and City Courts in State outside of Cook County .....	16
Total .....	55

From May 1, 1916, to May 1, 1917, there were instituted 42 new cases, as follows:

Appellate Court of Illinois.....	23
Superior Court of Cook County.....	10
Circuit Court of Cook County.....	9
Municipal Court of Chicago.....	5
Circuit and City Courts in State outside of Cook County .....	15
Total .....	42

A total of 99 cases.

Since last annual report, May, 1916, your committee has disposed of 35 suits, as follows:

Appellate Court of Illinois.....	1
Superior Court of Cook County.....	8
Circuit Court of Cook County.....	6
Municipal Court of Chicago.....	7
Circuit and City Courts in State outside of Cook County .....	13
Total .....	35

Of the 35 suits permanently disposed of, in one case in which a verdict for \$500 had been rendered and new trial granted, was settled for \$150, and one case the committee advised settlement, which was done for \$150. I wish to explain this settlement, because it is contrary to our policy to advise settlement in any case, but the doctor had prescribed Atropine Sulph. one gr. to the ounce and teaspoonful doses to two children in one family; fortunately one dose each to the children was all that was given. The doctor acknowledged the mistake and the druggist claimed he had called the doctor on the phone, which also was acknowledged, so what else could the committee do but get out as gracefully as possible. It cost the doctor \$150 for the two cases.

Two cases that were lost on first trial, we were granted new trials and they are listed as pending ones.

Two cases that were lost in the lower courts were appealed. One was a verdict for \$250, the other \$1,250. What the outcome of these cases will be is problematical.

Besides the 42 suits actually brought there have been 46 threats of suits, some of which may develop into



lawsuits, the majority, however, we do not expect to hear anything further.

A few cases I wish to call to your attention, one listed among the disposed of cases, in which the suit was instituted by an insurance company, the claim being that a simple and trifling injury which should have healed within a short time resulted in a permanent injury because of the ignorance of the attending doctor.

The committee were particularly anxious of this case because of the precedent the insurance company would have established. After three days' trial all of the plaintiff testimony being in, the judge ordered a verdict for the defendant.

We considered this a most vital case for every doctor in Illinois.

Another case that the committee feels particularly proud of the result, is the one reported in the recent State Journal by Mr. Folonie.

The case was a suit by the Dental Board of Illinois, proceeding by way of arrest of Dr. William A. Lurie on a charge of practicing dentistry without a license. The Attorney-General contended that a physician has no right to treat any disease of the jaw under any circumstances because of provisions in the Dentistry Act. After partial hearing of the State's case, Judge Olson indicated that the prosecution, which arose out of treatment of an antrum and jaw infection, could not be sustained. The State thereupon non-suited.

Had this case not terminated as it did, not one of you practicing medicine in this State would have the right to reduce a fracture of the jaw, open an abscess, resect for sarcoma or drain the antrum, in short any work whatever on the jaw or jaws.

As this case was not one of civil malpractice, your committee could not use their funds for this case, so the matter was taken up with our State Council and the Trustees of the Chicago Medical Society, who agreed to finance the defense if the committee would look after it. The above report is the result of that defense.

*Another Medical Legal Point.* The committee through their counsel, Mr. Folonie, have set up the defense in all compensation cases: that where compensation is paid and the employer has settled fully with employee that the case is ended; no further claim can be made against the doctor for malpractice, because the employer has paid for the damages in that case. We have been able to get one verdict on that claim, and we feel that it is a safe proposition.

From the above figures you will notice the gradual increase in malpractice suits, there being nine more suits the past year than during the previous year, and you must remember that the above cited cases were not all the suits filed in this State last year, because a great many suits are defended by insurance or defense companies and no report made to this committee.

*What Is the Cause of Increase?* Undoubtedly there are a number of causes:

*First,* I believe the workman's compensations law is responsible for some cases. Many lawyers of this

State have been deprived of a lucrative field since the compensation law went into effect and in looking about for new fields to conquer have lighted upon doctors.

*Second,* An indiscreet remark by a second physician following on a case, with or without the formality of dismissing the first, some remark is dropped, not with the intention of personally injuring the first physician so much as making himself popular, some inuendo is dropped in his talk.

*Third,* The physician himself, by carelessness, and by undertaking cases that he is not equipped or qualified to handle. A number of cases coming under this subdivision have been defended by the committee, and I may say that these are the cases that are so discouraging to the work of the committee, I will refrain from mentioning names and cases coming under this head. However, a sufficient number of such cases have been noted, that the committee feels some action should be taken, and with this object in view, we have drafted a new by-law which will be presented to this house of delegates for adoption or refusal, as the house feels disposed. This by-law shall provide for a committee known as the Grievance Committee.

*Fourth,* Deadbeats, hoping to defeat the doctor of his just deserts. These we will always have with us.

*Fifth,* Education of the public to higher standards and demanding better service. We must overcome this by keeping up with or a little in advance of the procession.

*Sixth,* Petty Jealousies, I think the quotation, "There is so much bad in the best of us, that it behooves none of us to say ought of the rest of us," is particularly fitting.

*What Is the Cure?* The first and foremost is prophylaxis. Do your work thoroughly and conscientiously, remembering always the welfare of the patient. Treat your brother practitioner as you would have him treat you. Develop the fraternal spirit, attend the local society meetings, meet your brother. You will find he is not a bad fellow, and you will learn to like him. United we stand and divided we fall.

If suit is actually started notify the committee at once and they will use every effort in your behalf, procure the best legal talent possible and carry your case without expense to you to a successful termination if that is possible. Unless you have experienced the strain of a suit for malpractice, you cannot imagine the worry and sleepless nights you will undergo, the fear of financial ruin, of the loss of prestige and standing in your community, after a lifetime of faithful work.

Before closing I should like to mention the tendency to make the work of the physician more strenuous; for instance, in North Dakota a bill was introduced in the last session of the legislature to place the burden of proof on the defendant physician. If it had passed it would have driven the insurance companies to abandon such risks, and forced the physicians to carry their own at a heavy expense.

Not satisfied with attacking the doctor where he

can defend himself, we have had several claims during the last year filed against the estate of doctors after their death. We feel the same duty toward the family under these circumstances as to the doctor while living.

#### MEDICO-LEGAL COMMITTEE.

Dr. King: Nine years ago Dr. Frederick Kohn was called in an emergency to attend a boy who was then fourteen or fifteen years of age. While playing in a sand pile with other boys he suffered a compound fracture of the humerus.

This boy had a good-for-nothing, drunken father who didn't take care of the family, who abused his wife, and later on, on her deathbed, refused to give her medical attention. The boy was afraid to go home, so, in company with two or three other boys, he walked over to the drug store that was near their home. The druggist there called Dr. Kohn, a young man then, who had only been in practice a couple or three years. He was not at that time a member of the Society.

He put a cast on this boy's arm, left a window to dress the wound and sent him home telling him to report the next day for another dressing. The boy didn't come, so the day following the doctor went to this boy's home to find out what the trouble was that he hadn't shown up. The boy's father was at home and abused the doctor decidedly—told him the boy wasn't worth spending money on—was very abusive to the doctor and to the boy and everybody that happened to come within his sight at the time.

The doctor told him in the presence of one witness that we have found that he would have nothing further to do with the case himself, and the boy should go to the county hospital. The father wouldn't send him to the county hospital, wouldn't consent to him going. So, two or three days later some of the neighbors notified the police and the police forcibly took the boy to the hospital against the father's will, the father abusing the police and hospital officials and everybody else.

The boy by this time had developed gaseous gangrene, it was claimed, I believe. The father would not consent to an operation, and the boy being a minor, the physicians at the hospital (being a charity hospital) wouldn't operate on the boy without the parent's consent. The father wouldn't give consent, so some of the charity organizations went to Judge Tuthill and a court order was issued by Judge Tuthill to amputate this boy's arm, and that was done.

Now the boy has reached his majority, and nine years later is suing the doctor. The doctor has been a member in good standing in our local society for the past six or seven years; in fact, he has never been dropped for non-payment of dues. As he was not a member at the time this service was rendered, according to the by-laws of the Society the Medico-Legal Committee cannot legally defend this case.

Your Chairman went this far when the case was presented to him and told Dr. Kohn that we would appear for him and at the preliminary hearing would

be present so that the case wouldn't go by default and would take it up with the House of Delegates. What is your pleasure, gentlemen? Shall we spend the money to defend this case, or do you want to throw it on the doctor himself?

Motion is made to defend the case. (Applause.)

That is all we have to report, thank you.

The Chairman: You have heard the report of the Chairman of the Medico-Legal Committee; what is your pleasure?

Motion to accept report is made, seconded and carried.

At the proper time there will be an opportunity given to give authority to the Medico-Legal Committee to take up this case.

The next committee to report is the Committee on Public Policy, Dr. Adair.

Dr. Adair reads report.

#### REPORT OF THE COMMITTEE ON PUBLIC POLICY

It has been a great privilege to me to serve as Chairman of the Public Policy Committee, the duties of which are somewhat vague, and no one seems to know just what they are or what to expect.

The first work to come under this committee were the resolutions, adopted at the state meeting held in Champaign last year (1916), regarding and opposing the Works joint resolution, introduced by Senator Works, of California, "making it unlawful for any member of the Public Health Service to become a member of any medical or private health association." Letters were addressed to members of the Senate Committee on Public Health and National Quarantine, enclosing the resolutions. Most favorable answers were received from all, copies of which I have on file.

The other resolution "adopted and favoring the creation of a division of Mental Hygiene and Rural Sanitation in the Public Health Service."

The Senators and Representatives from Illinois were also notified of the action of the Illinois State Medical Society, endorsing the passage of this bill, and asked to lend all honorable means for its enactment as a law of the United States government. Each Senator and Representative promised they would give this resolution careful consideration and file same for proper reference. I am most proud to have the signatures of these men.

Next came the great undertaking of Health Sunday for Bloomington. When I say "great undertaking," I am sure all will understand if they have ever tried to get a satisfactory reply to any communication addressed to the doctors. Repeated letters, telephone calls, etc., were most numerous before I had the program ready.

In late February I visited Bloomington and I was very fortunate in being able to meet the ministerial body in a group and I found them unanimous in extending their various pulpits on Health Sunday, under the auspices of the Illinois State Medical Society.

Then, after returning to Chicago, my work began and I found the profession most willing to go to



Bloomington and made the day one never to be forgotten by the hospitable people of that city. We filled eighteen pulpits in Bloomington and Normal.

In the evening of this Health Sunday a mass meeting was held in the largest and most beautiful of churches—the Second Presbyterian church—which seats 2,100 people, and it was comfortably filled. The Chairman of this committee introduced the speakers of the evening: Dr. John Dill Robertson, whose subject was, "Willful Waste Makes Woeful Want," and Dr. William A. Evans, who told "How to Keep Well." The services of the day were closed by this audience of 2,000 people standing and singing "America."

Respectfully submitted,

SADIE BAY ADAIR,  
Chairman Public Policy Committee.

You have heard the report of the Committee on Public Policy; what is your pleasure?

Motion to adopt report is made, seconded and carried.

The next will be the report of the Medical Education Committee, Dr. Martin Ritter, Chairman.

Dr. Ritter reads report:

#### REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

Your Committee on Medical Education, in submitting to you the annual report, is pleased to be able to state that the laws governing medical education in this State have made great progress during the last year.

Your Committee devoted its energy to ascertain the laws of the different States of this Union, not only regarding the qualifications necessary for entrance to and graduation from medical colleges, but particularly to devise ways and means to make improvements in the requirements necessary to obtain a charter under the Corporation Act.

For this purpose we have corresponded with the presidents of three universities of this State and also have corresponded with over forty Secretaries of State of these United States. Only twelve States have laws covering this subject, and with the exception of two of them, the laws are so vague as to be practically useless to prevent "mushroom" colleges from being brought into existence.

While we were ready to make suggestions to this Society in regard to legislation needed, we are glad to state that House Bill No. 657, "A Bill for an Act to Revise the Law in Relation to the Practice of the Art of Treating Human Ailments," was passed by the Legislature and will be in force July 1, 1917. It appears that this law gives the Department of Registration and Education authority to "prescribe rules and regulations defining, for the respective professions, trades and occupations, what shall constitute a school, college or university, or department of a university, or other institutions, reputable and in good standing, and to determine the reputability and good standing of a school, college or university, or department of a university, or other institution, reputable and in good standing by reference to a compliance with such rules and regulations." This

makes it unnecessary for any other action to be taken in this State at the present time.

This law also makes rules providing for a uniform and reasonable standard of maintenance and training to be observed by all schools for nurses. It establishes a standard of preliminary education deemed requisite to admission to a school, college or university, and requires satisfactory proof of the enforcement of such standard by schools, colleges and universities.

This Committee appreciates the splendid efforts and the results accomplished by Dr. C. St. Clair Drake, the efficient Secretary of the State Board of Health, as well as of our retiring President, Dr. William L. Noble, and the members of the Legislative Committee, Dr. Noble M. Eberhardt, Don W. Deal and E. P. Sloan.

As under the recent law the Department of Public Health will be created in place of the State Board of Health, your Committee suggests that the By-Laws of the Society be so changed as to carry co-operation of the Educational Committee with the new Department of Health.

We recommend also that wide co-operation of the State and county societies with the new department in the education of the public through lectures and other means be inaugurated.

Respectfully submitted,

MARTIN M. RITTER,

A. M. CORWIN,

FRANK BUCKMASTER,

Committee on Medical Education.

(Applause.)

You have heard the report of the Committee on Medical Education; what is your pleasure?

Motion to adopt is made, seconded and carried.

Possibly it would not be out of place, while there is, in the order of business, no provision for any remarks from the President, if I would simply touch upon some of the points of the year briefly for the purpose of emphasizing the same.

First, I want to call attention to these joint county medical society meetings. I attended the one at Freeport, which was more than a joint county medical society meeting, because they had members from southern Wisconsin, eastern Iowa and Illinois, and I assure you it was a very inspiring and very, beneficial meeting in every way.

Another one I attended at Pontiac, which was remarkably interesting, and the good fellowship of the members of the counties participating in the meeting was exceptionally manifest; and another joint meeting I attended at Effingham, where the same condition existed, although the weather was extremely disagreeable and the roads muddy—yet they had a very favorable number assembled and the papers were interesting and to the point.

Relative to the work during the year that has to do with the Legislative Committee, or the legislative work, we started out this year with the idea of classifying the senatorial districts in Cook so that



we could tell every doctor that lived in a certain senatorial district, and the same work was done by the Legislative Committee in the State, where it is much more easily done, because they can be classified readily, being mostly in the senatorial districts taking in the whole of the county, but in Cook it is a rather difficult thing where they take in wards and cross wards in every conceivable manner. Now, that was done at some expense to the Chicago Medical Society, and it was some considerable effort.

We had a woman working on it for weeks and weeks, and yet when it came down to a rush time when you had to carry certain information to the doctors and tell them that certain men were their representatives in the Legislature, we found it very, very fortunate that we had that list, because the district was there with the list of all the doctors residing in it; you could go through that list and pick out the doctors you wanted to reach and your stenographer could get the letters out in a very short time. It was a very, very great service to us, at the beginning of the legislative program this year.

Now, medical men in the Legislature, I think a whole book could be written on what they don't do, but they do do some things, and there are certain things that have come to my knowledge this year that have emphasized the importance for them to be alert, and I will call attention to that in a minute. The question of the revision of your Medical Practice Act is manifest and we will speak more about that tomorrow, but the real detail, actual work that is to be done, the purpose and the effort of getting into the mind of a particular member of the Legislature what a bill means and what effect it has upon his community and upon the profession, upon everybody else, is very, very important, and the work that the Legislative Committee did this year in listing up the family doctors of the members of the Legislature is only just one step.

I am very much pleased with the recommendation made here that the county society subscribe to the Publicity Bureau at Springfield that will furnish them with the bills as they come out. It will give them a better idea of what their Legislators are up against. You can't blame them for overlooking these things, because there is an enormous amount of stuff that goes through that mill and very little is left when it comes out.

It seems to me we've got the best Legislature, probably, that we've ever had. I honestly believe that there isn't any jackpot in this Legislature, and I am frank to say that in all my experience in our State Legislature, and during the last twenty years, I have been down to pretty nearly every Legislature; I don't think I could ever say that of any other, and I am really astounded and wonder why it is. I don't know; I haven't figured it out yet.

But there are always good men in the Legislature; there are always clean men in the Legislature; there are always men, if you can get an idea into their heads, that the chances are they will amplify it and

put it out better than you can, and that was demonstrated at this present session when the Medical Practice Act was before the sub-committee of the judiciary committee. Men on that sub-committee grasped that situation quicker than counsel for the committee of osteopaths, and many of the rest of us who ought to have known more about it, could have done.

It seems to me the medical profession should sit up and take notice of this one word of warning, if not for their own interest, for the interest of the people who look to you as the conservators of their health and their medical advice.

Of all the somewhere about a dozen cults that are permitted to practice medicine in the State of Illinois, under the title "other practitioners," all are based on some peculiar view of the etiology of disease which, when sifted down to its ultimate point, is absurd—foolish. And I can see how the doctor, knowing what their pretention was as to the cause of the disease and their contention as to how it should be cured, is struck that it is so utterly foolish that it is not entitled to any consideration at all.

But it doesn't follow that that is the case. Perhaps that is the case of all these cults except one, and there is one of these cults that is getting wise, and it has some doctors who are shrewd, who are far-seeing, and who have selfish, monetary interests in the success of that cult. I refer to the osteopaths.

Up to four years ago, possibly two years ago—anyway, up to four years ago the osteopath's idea of the etiology of disease was the same as the chiropractor or spondylopathist—all based on the displacement of a muscle or cartilage or something, and they put it back and the patient got well—that is all there was to it. But now they've got wise; they have been before the Legislature from time to time and they have been up against the medical profession until they see that they can't defend their position on the narrow etiology of disease upon which they first based their practice. If they can't go any farther than that they can't get anywhere, because they have evidently got enough education, enough knowledge of the human body, that they feel how helpless they are to do anything.

More than that, manipulation alone doesn't give them enough of an opportunity to impress the public—doesn't give them enough of an opportunity to convince the public that they are real doctors—they are only fellows that use their hands—they are only masseurs or Swedish movement or something else which the layman couldn't distinguish the difference between at all.

Every one of those fellows is anxious to be known as a doctor of medicine—every one wants to convince his practitioners that he knows just a little more along some line than the doctor of medicine. Now, that statement is advised after careful study and discussion with dozens and dozens of osteopaths, as I have had opportunity to discuss things with them during the year; but if I hadn't seen an osteopath and hadn't talked with them, just the history of the

position of osteopathy during the last years and the present time would indicate what they've got in their minds, because last year they, at their state meeting, incorporated what they term "the principles and practices of osteopathy," which they copyrighted and which they embodied in their charter of their state society.

Now, that declaration of principles and practice doesn't say anything; it is the most incoherent, irrational, illogical, inconsistent proposition in many respects that could possibly be put out, for it doesn't start anywhere and doesn't get anywhere from an intelligent, logical effort of reasoning. However, it does do this: It makes statements as if they were new truths which are apparent to everybody, but it makes them in a way to look like great wisdom. It makes great pretensions, and in the same paragraph it will reverse itself on these same pretensions.

It sets forth the work that is done by the colleges and lists the studies, the character of them, etc., which would do credit to a pretty high-grade medical college if it was a fact that they gave all that intelligently and in sufficient time. It would be a pretty good medical college.

Now, during the hearings before the Judiciary Committee, one thing came out apparent, and Representative Dietrich, of Beardstown, in this State, an attorney and ex-judge, evidently was a little piqued at some of the efforts of the osteopath's attorney in trying to hoodwink him, and he simply took up the cudgel finally as the attorney for the osteopaths was making this contention: "Why, it is presumptuous that men that have taken so many years, men studied in chemistry, pathology, everything else—it is absurd that they shouldn't be allowed to open a boil"—that's one of his stock phrases, and another one—"It is absurd that they shouldn't be allowed, in a case of sore throat, to give a gargle at least"—"it is absurd that in case of a man's suffering great pain that they shouldn't be allowed to give a hypodermic of morphin—it is absurd."

Judge Dietrich put it to him very aptly when he said: "Mr. Patterson, as I understand from your statement, as applied to law rather than to medicine, a man could start in as a young man without any preliminary education and he could study the drawing up of contracts and go before the Supreme Court and be licensed as a lawyer for the drawing up of contracts. Then he could draw up contracts for awhile, be that much of a lawyer, but be studying the laws relative to torts and corporations or something else, and when he thought he was sufficiently good in that he could go to the Supreme Court and they would license him to practice that additional law. Perhaps when he was 60 years old he would be a full-fledged lawyer. Is that the way you want to make doctors? Is that right?"

The idea was so foolish that Mr. Patterson was, of course, confused, but that the osteopaths intend to practice medicine is undoubted; and, in fact, some of their members said: "Well, that's all right this

year, but we'll be back next year and we'll be doing minor surgery, we're going to sew up perineums, and we're going to do this and that—anybody can do that, why shouldn't we?"

They are bound to get in to practice medicine without qualifying as doctors of medicine and surgery.

Why do we have to hold the osteopaths down? Somebody said, "Nothing came into this world without effort—nay, without great effort," and I think it was certainly exemplified when I think of the conferences that we had with the osteopaths this winter. Day after day, week after week, we were listening to this kind of stuff, and yet all the time we were learning something.

There is no question that if they were allowed to use any medicines at all that they would make that a pretext for deceiving the public that they were qualified to use all medicines. As one of them put it, they studied so and so; we studied so and so. There wasn't anything that we studied to qualify as doctors that they hadn't studied to qualify as osteopaths.

I said, "Nobody will object to that." "Well, but we ought to be allowed to qualify as doctors." You have only to take an examination as an osteopath, not as a doctor, and if you think those fellows are dishonest you are mistaken; they are not. They are simply over-zealous in what they have been taught. They believe in the profession of osteopathy; they believe they can do things.

In the spirit of facetiousness I remarked, "Well, do you treat Jimmy Jones for diphtheria with osteopathy?" "Of course!" "What do you want to be a doctor for, then?"

I tackled another one and said, "I suppose you can take off cataracts." Several of them sat up quick. "Ask Dr. So-and-So; he has taken off cataracts with osteopathy from the Atlantic to the Pacific." You can cure an atrophy of the optic nerve. He has a case right on tap of somebody in Syracuse, N. Y., and all the affidavits that a patent medicine firm could need to exploit a remedy.

It is a serious matter; it's a matter you've got to face. I think that you've got it stopped to a certain extent, but it isn't anywhere near over.

I started to tell you why it was possible that we were able to bluff the osteopaths—to cajole them a little, and to jolly them a good deal; because, frankly, I don't see what they got out of that revision of the Medical Practice Act. They seem satisfied with it, but I don't see what they got, and the only explanation I have was that those fellows were so annoyed and so irritated and so humiliated by the assumptions that were so much cruder than theirs and by people that were studying osteopathy that were so much more ignorant than they were, that they feared were discrediting the whole business, that they were willing to do anything if they could get the privilege of having themselves classified as osteopaths and keeping other cult practitioners from applying to the State Board of Health to take an examination as an osteopath.



Under the provisions of the Medical Practice Act, if a man takes a course at a chiropractic college he has to apply for examination as a chiropractor. They are all based originally on the same etiology, but he could apply as an osteopath if he took a course at an osteopathic college.

Now, the osteopaths had established a little reputation and all these other cults, so much inferior than they were, wanted to get that high. The osteopaths were in a bad way. I said to one, "You are trying to climb up in your profession and the more ignorant cults are biting you all the time as you are trying to climb up, and doctors are kicking you in the face, so you've got a hard time, haven't you?" (Laughter.)

It was recognizing what was troubling them which was the large leverage we had in jockeying with them, because we gave them to understand if it didn't go through the way we wanted it, if they didn't get rid of the idea that they were going to practice medicine we'd let the old act stand as it was and let the insects eat them alive. (Applause.)

Right over the border of your river here, in Iowa, there are about twenty-seven hundred men in all these cult schools that are waiting to go into Illinois, anywhere they can go in, and the osteopaths don't amount to much in this State as they stand today. There are probably less than five hundred of them. Some are pretty decent fellows and some doctors of medicine, and it is your duty who know what it means to know what the exploiting of these foolish ideas means—it is your duty to protect the people against this class of practitioners.

If this law goes into force it will wipe out all schools in Illinois except Littlejohn's, in Chicago. Littlejohn is a doctor; many who are teaching are doctors. He gives a pretty fair course in medicine, and it is apparent to me from his talks, that Littlejohn's idea is this: He is going to make osteopathic doctors, he is going to run a medical school, and he wants them to be known as osteopathic doctors, the same as they were formerly known as homeopathic doctors. He thinks he can establish another cult of doctors and put the name "osteopath" in front and make them popular with the people.

That's the basis of the whole thing. Whether he succeeds or not depends a whole lot on the doctors themselves—depends to a large extent upon the intelligence of which we have great hopes, upon the Department of Registration and Education of the State.

Now, gentlemen, unfinished business will be in order. There is the matter of Dr. King's suggestion. I would entertain a motion along that line. Will Dr. King formulate that motion, giving the names in the case so the stenographer can get it? Just formulate a motion.

Dr. King: We didn't expect to make a motion; we were simply asking for recommendation to be given power by the House of Delegates to handle this case or defend this case for Dr. Kohn.

The Chairman: The motion then is that the Medico-Legal Committee be given authority to handle the case of Dr. Frederick Kohn.

Motion is seconded.

Are there any remarks?

Dr. Doan: Before that motion is put through it seems to me that it would be proper that we consider the depth to which that will lead us. I have in mind now a member of my own local medical society who joined the society, but was dropped by failing to pay his dues, and he has on hands a case which will cost him some money. Yet he is at present a member in good standing. If this case goes through, I consider the man in my county a better right, because he was a member of the society before he got into his difficulty, and it seems to me that a thing of this kind should be considered—the depth of water into which it will lead us if we pass it as it now stands.

If he will consider it, I'd like to make a motion that we let this lay over until our next meeting that it may be considered thoroughly and the consequences of it be considered thoroughly before we jump into it.

Dr. King: May I answer that, Mr. Chairman? The case that the doctor cites may be all right; it is possible that that case should be defended, but the committee feels that in cases where a man had been a member and his membership has been dropped for non-payment of dues, we haven't very much sympathy for him. We have so little sympathy, in fact, that you remember two years ago your committee, when the by-laws were revised, were particular to have certain by-laws drafted and put into our constitution for the express purpose of handling just such cases as the doctor speaks of.

To put in that a man must be a member both at the time service is rendered and the time the action is brought is the very by-law that stops us in Dr. Kohn's case. I speak in behalf of Dr. Kohn for this reason. He had been out of college a couple of years at the time. He was called in; he was a young man in practice; I don't suppose he had ever been invited to join the society at that time. He did join the society soon as ever he was invited to join; he's been a member in good standing ever since; his dues have never lapsed and I have taken the trouble to look that matter up to be sure. He didn't join because he thought this thing was coming, because the man had no thoughts of anything of the kind.

Remember this service was rendered nine years ago, in 1908. He never got a cent for his service. It was worse than charity because the boy's father abused him.

Now, the committee doesn't object to handling anybody's case, but we are up against some pretty tough propositions. We meet some doctors when we are talking who say, "What good does it do to belong to the medical society? They never do anything for you."

I am not going to object to bringing in the members in the doctor's branch; we will defend him just as hard, if the House of Delegates say, as we would defend the President of the Society, or anybody else,



but I feel that this is rather one of exception in Dr. Kohn's case. It is one of those cases that has been filed by the patient himself after he has reached his majority. He is within the law of limitations—a minor has until he is 23 years of age, and the patient isn't 23 years of age yet.

The Chairman: Any further remarks?

Dr. Burkhardt: I think I understand Dr. Doan's proposition in regard to this matter, and I think that it is really a question that should be approached with a good deal of caution on account of the precedent that it will lay down for the future. It is really a dangerous precedent.

I understand from Dr. King's explanation that it is perhaps an unfortunate circumstance, but now if we go to requesting the by-laws of the Society to be changed to meet any particular cases, the only question is where we are going to stop in the future. It is just an unfortunate condition. I think it should be given a good deal of consideration before we make an innovation of the law or make a real innovation upon our Constitution.

Dr. Van Derslice (of Cook): I would make an amendment to that motion—a substitute motion. I agree very fully with Dr. Doan, and I believe that it would be unwise for this House of Delegates to abrogate the by-laws, and I would make a substitute motion that this matter be turned over to the Council of the Illinois State Medical Society, and if necessary they may go out and get subscriptions among the doctors to pay this bill.

Motion is seconded.

The Chairman: Any further remarks?

Dr. Doan: May I speak again? I hope that my remarks, while rather enthusiastic, will not be taken as being absolutely and positively and permanently against this. I ask that we consider it at the next session of this House. Then we will have had time to consider the matter thoroughly and not be brought here all of a sudden without hardly a second's consideration whatever, and I said to you, as you all know, whenever a constitution is trampled on it injures our standing as a society, and it seems to me if we pass upon it at our next meeting of the House we will then have all the chance to have talked personally with this committee and will better understand.

That isn't the only case. Dr. King will be willing to tell you it is not the only case in the State of Illinois where a man was not a member and suit has been brought and asked for, and if we trample on the constitution, as I said before, it is setting a dangerous precedent and I would like to ask that we consider it at our next meeting rather than now.

The Chairman: A substitute motion has been presented that this matter be considered at our next meeting.

Motion is seconded.

The Chairman: The vote is on the substitute.

Delegate: That there will be no consideration other than an amendment to our by-laws?

Dr. King: We don't want it amended.

The Chairman: We couldn't amend the by-laws at our next meeting. You can consider it; there is no objection to that.

Dr. King: This case has only been filed here a month or six weeks ago. It probably will be two years before it reaches trial and there is no particular hurry about it.

The Chairman: The motion of Dr. Doan is to refer the matter to the Thursday meeting of the House of Delegates. That is seconded. Are there any remarks on that motion?

Motion is carried.

The Chair will entertain a motion to appoint or elect a Committee on Resolutions, as there are several resolutions in the hands of the Secretary which will have to be considered for the next meeting.

Motion that the Chair appoint a committee of five is made, seconded and carried.

The Chair will appoint on that committee: C. E. Price, George Stacy, Charles O'Byrne, J. J. Roach and J. W. Van Derslice.

Anybody having any resolutions he desires to present may present them now or turn them over to this committee.

Dr. Van Derslice asks to be excused from the committee; I will put Dr. James Clarke on the committee in his place.

We are under unfinished business, gentlemen; is there anything else to come before the House of Delegates?

Dr. King: Our committee wants to give notice that we want a new by-law to provide for a committee to be known as the Grievance Committee. We will bring it up at our next meeting—Thursday morning.

The Chairman: You will be prepared with the by-law at the next meeting?

Dr. King: Yes, sir.

The Chairman: The Secretary will make a note of that. Is there anything further before the House?

The Secretary: I move that we adjourn until 8 o'clock Thursday morning.

Motion is seconded and carried.

ADJOURNMENT.

#### HOUSE OF DELEGATES

*Thursday, May 10, 1917, 9 a. m.*

The meeting was called to order by the President, Dr. William L. Noble.

The first order of business was the roll call. A quorum was found to be present.

The Secretary read a telegram from Governor Lowden:

SPRINGFIELD, ILL., May 9, 1917.

Dr. W. L. Noble,

President Illinois State Medical Society,  
Bloomington, Ill.

I send my greetings to your Society. I want to take this opportunity to thank you and through you the Illinois State Medical Society for your hearty co-

operation with me in the formulation and enactment of the civil administrative code. Your Society is entitled to great credit for the high stand you took in this matter.

FRANK O. LOWDEN.

The minutes of the last meeting were then read by the Secretary. These minutes were approved as read.

The next order of business was the election of officers. Dr. Fiegenbaum, of Edwardsville, was made President; Dr. E. P. Sloan, of Bloomington, First Vice-President; Dr. Sadie Bay Adair, Chicago, Second Vice-President; Dr. A. J. Markley, Belvidere, Treasurer; Dr. W. H. Gilmore, Mt. Vernon, Secretary. All of those elected received the unanimous vote of the convention.

The next order of business was the nomination of Councilors to take the place of those whose terms expired.

Dr. Emil Windmueller, of the first district, was nominated and unanimously elected to succeed himself.

Dr. Edwin S. Gillespie, of the second district, was nominated and unanimously elected to succeed himself.

Dr. Cyrus E. Price, of the eighth district, was nominated and unanimously elected to succeed himself.

After this, nominations followed for a Public Policy Committee to succeed Dr. Sadie Bay Adair, Dr. H. N. Rafferty and Dr. J. A. Poling.

Those nominated for the Public Policy Committee were: Dr. Sadie Bay Adair, Dr. H. N. Rafferty and Dr. C. W. Lillie, of East St. Louis, all of whom were unanimously elected.

The term of Dr. Martin M. Ritter, Chairman of the Medical Education Committee, having expired, nominations for this position were called for. Dr. Ritter was nominated to succeed himself and was unanimously elected.

Nominations were called for for the three places on the Medical Legislation Committee left vacant by the expiration of the terms of Dr. N. M. Eberhardt, Dr. Don Deal and Dr. E. P. Sloan. The nominations were: Dr. Don Deal, Chairman; Dr. Eberhardt, to succeed himself, and Dr. R. L. Morris, of Decatur. All of these gentlemen were unanimously elected.

The terms of Dr. W. O. Krohn and Dr. George Stacy, of the Medico-Legal Committee, had expired. Both gentlemen were nominated to succeed themselves and were unanimously elected.

The next order of business was the election of delegates to the American Medical Association.

Dr. Noble: I would ask Dr. Newcomb to take the Chair a minute, and I would request the personal privilege to address the House of Delegates:

I recognize that this is a little unusual, but conditions seem to be such in the last few hours that for a clear understanding of the situation to be presented to the House of Delegates, it is necessary for me to do so.

As the members of the House of Delegates are aware, it has been the practice for years for the

retiring President of the Association to be elected as a member of the House of Delegates of the National Association. They are also aware that the Chicago delegates usually form a caucus with some of the rest of the delegates and they get together and agree on their slate, which has its advantages and is very desirable as a whole.

Now, this is said without any feeling at all on my part, but simply as a matter of explanation. It appears that the Chicago delegation have forty-two members, about twenty-eight of whom were present last night, and two other gentlemen were nominated to fill the position for the House of Delegates which goes from Cook county, and I did not receive sufficient votes to be nominated, but that same caucus did nominate me as an alternate delegate to the American Medical Association. My respect for the position which I have held during the last year, and my self-esteem would not permit me to accept the nomination as an alternate delegate, and neither will I accept a nomination for delegate to the National Association. An individual amounts to but little in the course of events, but for an Association like this to have anything come in that introduces an element of lack of harmony, or that interferes with the efficient and effective working of the organization in the light of the experience that I have had in public office, is to me a disaster, so that my personal feelings in the matter will be subjugated and subrogated to the benefit of the whole Society. (Applause.)

Dr. Babcock (of Springfield): I want to say this, that this is the first time I have ever been a delegate to this meeting. I am not a regular attendant and not well known, but I had occasion to observe last night the action of this caucus, and I think that this Society, as well as some great political parties, are liable to dig their graves by their methods. There are some things that are best honored perhaps by the breach than the observance. I think this is not the case with our honored President. I think he should have been a delegate to the national meeting, and I further want to say that I, as a member of the House of Delegates and as a representative of Sangamon County, disapprove of the action of the Chicago caucus, and also disprove of the action of the county caucus in concurring in such a matter. When the doctors lose their politeness, to say nothing of anything else, they are beginning to sink below the level of the ordinary politician.

Dr. Noble: I am not unmindful of the fact that Dr. Babcock has been out of order, and however flattering his remarks were to your Chairman, that was not the motive which prompted me not to call him to order. After this, please confine the business of the House of Delegates to the matter before us, which is the nomination of members for the House of Delegates of the American Medical Association. There are three vacancies.

Dr. McGlannan: I desire to nominate Dr. Noble, of Chicago, as a down-state delegate.

Dr. Noble: Gentlemen, it is useless. No. Now, please don't confuse business by doing this.



Dr. Donald Deal was then nominated by the down-state delegation. The names of Dr. R. R. Ferguson, of Cook County, and Dr. Charles J. Whalen, of Chicago, were also placed in nomination.

Dr. Miller (of Peoria): For the first time I have just now been advised that there was a caucus of down-state members last night. There were twenty-five members present in that caucus, and I suppose there must be seventy-five members at least from outside of Cook County who are delegates. I question whether a caucus of twenty-five is representative of the down-state delegates—

Dr. Noble: I will have to call you to order. That is not the business before the House. Are there any other nominations?

Dr. Miller: I would like to put in nomination Dr. Noble, of Chicago.

Dr. Noble: I beg your pardon, doctor. Don't do it. I cannot have this.

The gentlemen nominated, Dr. Deal, Dr. Ferguson and Dr. Whalen, were then elected as delegates to the American Medical Association.

Dr. A. L. Mann, of Elgin, was nominated as an alternate to Dr. Deal; Dr. W. O. Krohn, of Chicago, was nominated as an alternate to Dr. Ferguson, and Dr. C. B. King, of Chicago, was nominated as an alternate to Dr. Whalen. These gentlemen were unanimously elected by the convention.

Dr. Noble: The next order of business will be the fixing of per capita tax for the ensuing year.

Dr. Gilmore: I move that the dues remain the same as they are, \$2.50. (Seconded and carried.)

Dr. Hagler, of Springfield, then introduced Senator McGill, Superintendent of Schools of Springfield, who delivered a short address on the advantages of Springfield as a convention city for state conventions during the coming year. He referred particularly to the State centennial celebration and the historic interest of Springfield this year.

A motion was then made that the convention go to Springfield for its next meeting. The motion was seconded. An invitation was read in the form of a telegram from Peoria, asking the Illinois State Medical Society to make Peoria its next meeting place. Dr. J. F. Cooper addressed the convention on the advantages of Peoria as a meeting place.

It was finally decided to pass out a ballot so that the members might record their desires as to the convention city for the coming year.

Dr. O'Byrne (of Chicago): I move that the Illinois State Medical Society tender to the commission on the centennial its aid and co-operation in any way that can be of service in commemorating the hundredth anniversary of our admission as a State. It would be my suggestion that the Chair appoint a committee of five to co-operate with the commission on the anniversary celebration at Springfield next year. (The motion was seconded and carried, and the Chairman announced that he would appoint a committee later.)

It was then announced that Springfield had re-

ceived the largest number of votes and would be the meeting place for the convention next year.

Dr. O'Byrne (of Chicago): Inasmuch as the next time of meeting may not coincide with the situation at Springfield as the best time to hold the meeting, I move that the President and Council be given authority to fix the time of meeting next year.

Dr. Gilmore: That is given the President and Council in the by-laws anyway. (Motion withdrawn.)

Dr. Noble had to leave the room and asked Dr. C. F. Newcomb, of Champaign, to preside during his absence.

Dr. Newcomb: Is there any unfinished business before this House of Delegates?

Dr. Whalen (of Chicago): I wasn't at the meeting of the House of Delegates the other night, but I happen to be on a committee having to do with health insurance, and I expected to be relieved of this onerous task by the next administration. I would like to consummate the work that the committee has done by having the House either reject or approve the work of the committee thus far.

You have no doubt a reprint of the work of the committee as far as it could go before the meeting of the House of Delegates. Everybody has received a copy, I take it, and we would like to have some action approving or disapproving it.

Since the document has been circulated, we have had a protest from the American Association of Labor Legislation which was responsible for the inauguration of the idea of health insurance in the United States. The criticism I will read to you, because the committee believes it should be answered in detail, and also approval or disapproval of the work of the committee in the way of a reply. This reply bears all the earmarks of having gone the round from Dr. Rubinow to the Chairman of the Committee of Health Insurance of the American Medical Association. In other words, it has gone back through the circuit of men who are promulgating the idea. It is written by Eugene Lies, who is Chairman of the committee in Illinois. (Reads letter.)

Unfortunately, I have had very serious sickness in my family extending over a long period of time, and if it were not for this report I would not be here today. The committee did not get together as promptly as they would probably under other circumstances, but with the little time they had at their disposal they formulated the following reply. (Reads.) (Letter and reply printed in June JOURNAL, pp. 419-424.)

The committee, as I say, would like to have the approval or disapproval of the work. It has been a very strenuous proposition, I assure you, as some of the men can testify. Whoever takes up the work, and it is a very important work, should be prepared to meet it, and your committee should have some data to work upon so that they will know whether what has so far been done meets with the approval of the profession of the State of Illinois. I



have here another letter from the Insurance Economic Society of America, asking permission to quote the committee report. (Reads.)

Before I leave the subject, I want to ask the privilege of the floor for the Secretary of the State Health Insurance Committee, Dr. Chapman, who is not a member of the House of Delegates, but I assure you that Dr. Chapman is just full of health insurance information, as you who read the *Journal of the American Medical Association* will recall, if you have read his article in the February issue of the *Journal*.

A motion that Dr. Chapman be granted the privilege of the floor was seconded and carried.

Dr. Chapman: I was perfectly innocent of any desire to impose on the House of Delegates, but Dr. Whalen has the idea that we should have a sort of a rally, and that anything that can be said to increase interest in the subject of health insurance would be time well spent.

The health insurance subject is more important than we have any indication of men over the State realizing. Dr. Whalen, in his committee work, gave an opportunity to the president and secretary of each county society to offer suggestions and to become members of the sub-committee, working under the Committee of Health Insurance of the State of Illinois. Out of the total number of counties in the State—101—he heard from probably 16 or 17 counties. The rest didn't honor him with any reply. That would argue a very, very great lack of interest.

As to what health insurance is, I suspect that the men over the State who have paid no attention to that request really had never given it a thought. It is in this country a proposition which is brought by the American Association for Labor Legislation. That association is not an American organization. It has a membership of some 3,000 and is affiliated with sixteen organizations of similar character in foreign countries. It is an international affair. It is not composed of either doctors or employers or employes. There are very few men in the total membership who come under either of those classifications. The supposition is that their work is entirely altruistic. They desire to reform this country, and our contention is that they have picked a poor method of going about it.

The subject of health insurance originated in Europe some thirty years ago, and it was found, after twenty-five years of trial, that voluntary insurance was absolutely a failure. The men declined to stay insured on account of the expense of paying the dues. They would rather let it go, let it slide. After twenty-five years it was decided that voluntary forms were all failures, and therefore that the remedy was compulsory insurance. Beginning about 1912, during a period of three years, five countries did adopt compulsory insurance, so that there has been time for us to observe its workings, and from all of those countries we get reports of dissatisfaction, just as a man studying the subject would be led to believe.

The relation which is substituted for the normal

relation between physician and patient is one of commercialism entirely. The physician is hired by a third party and paid by the third party for services rendered to a patient in whom the third party, the carrier of insurance, feels not any personal interest at all, a financial interest only.

That is the thing which will wreck the medical profession as a profession, if it is allowed to continue, and will make us business men entirely.

I wish that every man who has one of the reports of the State committee would read it carefully and take it home and give it to his county society secretary and ask that it be read before his county society. It is a most excellent report. I can say that because I didn't do any of the work on it.

That report was the cause, I think, in the State of Illinois, of the bill proposing compulsory sickness insurance not being presented to this Legislature. The American Association for Labor Legislation did propose those bills and present them to twenty-one legislatures this year. That shows how active they are, and the provisions of the bill are things which should be read by every member of the Society.

Our American Medical Association committee, it seems, was not real well chosen to consider that subject. The report which appeared in the *Journal* of the activities of that committee accepts it is a fact that health insurance would some day appear in this country, that we might as well begin and arrange our affairs to accommodate it. There is no reason, if you will look at the subject, why we should consider that it is inevitable. We have plenty of room in this country, plenty of territory, where the population is not composed of industrial workers to any large extent, and that territory offers fields to any man who doesn't choose to sign up under the acts which were proposed as feasible by our American Medical Association committee. That makes our territory different from Germany and England. There they had to accept it, and they accepted it under compulsion, and it was not satisfactory.

When the report of the Illinois Medical Society committee was made public, it was of such nature that the American Association for Labor Legislation withdrew its bill before the Illinois Legislature and proposed in its stead that a commission be appointed to settle the subject. All they asked was \$50,000 from the Illinois Legislature to investigate the subject. That was cut down, after argument, to \$20,000, and that is the way it stands at present. Now, since the work of that commission is to be from 75 to 80 per cent. of medical character, it seems reasonable and just that the medical profession should have equitable representation on that commission, and I wish to suggest that the Illinois State Medical Society, through its House of Delegates, may request from Governor Lowden that that commission grant equitable and adequate representation to the medical profession. The rest of the commission should, by rights, be made of employers of labor and of employes. Those are the three classes of men who

are interested. The reformers, altruists, whoever they are, will undoubtedly expect some representation on the commission to present their side, and we would not wish to deny it, but we should insist, and have a right to insist, that the rest of us who are interested be granted recognition, and I would ask that that request be presented to Governor Lowden from this House.

The American Medical Association committee, regarding industrial insurance as a thing which must come, has given the impression that the medical profession is largely in sympathy. That the medical profession is not in sympathy with the move can be ascertained by attention to the resolutions which have been passed by medical societies all over the country, in Massachusetts notably. The American Association for Labor Legislation, in considering the subject, have very, very many times given out statements which are misleading, notably in regard to California and Massachusetts. They claim that, in both of those states the medical profession has endorsed a plan for health insurance, where, as a matter of fact, they have not. Dr. Rubinow, a member of our American Medical Association committee, has helped them in giving out just those impressions, and I wish to read the following resolution in that regard:

WHEREAS, Social insurance has been investigated and been reported upon by a special committee of the State of Massachusetts in 1910, which unanimously recommended against the adoption of such a system on the part of the commonwealth, a Commission of Inquiry in the State of California has also transmitted to the Legislature of said State, on January 25, 1917, a report in which it said, "The commission is not at this time prepared to offer a plan for organization of health insurance, for it sees serious objection to the plan of the American Association for Labor Legislation which has been given great publicity," and

WHEREAS, It is self-evident that the great rank and file of the physicians of Illinois and of the United States are opposed to health insurance, that the Committee on Health Insurance of the Chicago Medical Society and of the Illinois State Medical Society have reported adversely to its adoption, therefore, be it

*Resolved*, That the House of Delegates of the Illinois State Medical Society instruct its delegates to the American Medical Association to introduce the following resolution in the House of Delegates of the American Medical Association:

*Be It Resolved*, That before proceeding further in this important subject, we recommend that the committee be asked to feel the pulse of the physicians of the United States, and in turn be guided by a popular opinion of the profession as to the desirability of compulsory health insurance;

*Be It Further Resolved*, That, since the chief spokesman of the American Medical Association, Dr. Rubinow has made statements regarding the findings of the state commission of both California and Mas-

sachusetts which are averse to the real facts, that in the future the committee be asked to censor his writings on the subject of health insurance before they are given publicity. (Applause.)

Dr. Snell (of Litchfield): I would make a motion that the work of this committee be approved, that its continuance or discharge be left to the discretion of the incoming President, and the recommendations of Dr. Chapman be forwarded to the delegates to the American Medical Association. (Motion seconded and carried.)

In accordance with the motion previously made that a committee of five be appointed by the Chair to act as a Medical Committee on the Illinois centennial celebration, to prepare a medical exhibit, covering one hundred years in medicine, and to co-operate with the Senate committee in every way possible, the following appointees were announced: Carl Black, Jacksonville, Chairman; C. C. O'Byrne, Chicago; M. W. Snell, Litchfield; Frank Billings, Chicago; W. A. Evans, Chicago.

Dr. Doan: I just have a brief statement here under new business: Dr. E. B. Hobson, of Jerseyville, has been made an honorary member of the Macoupin County Medical Society. I would like to ask that this Society make him an honorary member of the Illinois State Medical Society.

He is a man who has practiced medicine for I do not know how long, but he was a member of our Society more than ten years. He is past 70 years old, has retired and is living with his daughter. I think that is all the information that I can give. He is a man deserving of the place of honorary membership, because in the county society we gave it to him unanimously. (Carried.)

Dr. Doan: I move that we refer the matter with regard to Dr. Krohn, of Chicago, to the Council for consideration with power to act. (Seconded and carried.)

Dr. C. E. Price (of Robinson): (Report of Committee on Resolutions.) (No. 1.)

Motion that Resolution No. 1 be referred to the Council with power to act, seconded and carried.

Motion that Resolution No. 2 be adopted, seconded and carried.

Motion that Resolution No. 3 be adopted, seconded and carried.

Motion that Resolution No. 4 be adopted, seconded and carried: The motion was amended to read that in addition, the Public Policy Committee be empowered to formulate the forms for each county society.

Motion that Resolution No. 5 be adopted, seconded and carried.

Dr. O'Byrne: I move that the House of Delegates extend a vote of sincere thanks to the McLean County Medical Society, to Dr. E. P. Sloan, as President, and the Chairman of the Committee on Arrangements, Dr. Harry L. Howell, and to those associated with them in their work, the Masonic Order of Elks of Bloomington, the press and the people of Bloom-



ton generally for the royal way in which they have entertained the State Medical Society at their annual convention. (Motion seconded and carried.)

Dr. Nelson (of Springfield): In addition to the last resolution that was adopted, I think it would be entirely proper for this, the House of Delegates, to extend a vote of thanks to our retiring President for the efficient work that he has done and for the amount of energy that he has put forth in the interest of the medical profession of Illinois. (Seconded and carried.)

Dr. Burdick (of Chicago): I turned in a resolution to the Resolution Committee on the question of a moratorium for the benefit of enlisted people.

Dr. Noble: I will call on the Chairman of the Committee on Resolutions to answer that.

Dr. Price: I don't remember that.

Dr. O'Byrne: If such a resolution was submitted, inasmuch as it involves class legislation, we thought it best not to adopt this resolution. Undoubtedly Congress will take some such action, but the committee didn't think it wise for the State Society to take any action.

Dr. Burdick: My point of view is simply this, Mr. Chairman: There are a great many medical men and other men going in large numbers. Their debts will run along in a legal way, just the same when they are called to the colors as if they were home. Now, every country at war has so far adopted what is known as a sort of moratorium. In other words, suspending the legal instruments against those men while they are serving the colors, and I don't think it is anything more than a plain question of right and wrong. The men that are going to the colors haven't got this country into this mess. They are trying to get it out of the mess, and the country should at least protect them while they are doing their duty. I think any body of men representing the number of men that we do here has a right to give its idea to Congress along that line. (This is Resolution No. 6.)

Motion to adopt Resolution No. 6 was seconded and carried.

Dr. King: I think this probably would come under new business. It is the recommendation for a new by-law providing for a Grievance Committee in our State Society. (Reads.) (This is in the hands of the Secretary.)

A motion that the amendment as read by Dr. King be adopted and made a part of the by-laws of the Illinois State Medical Society was seconded and carried.

Dr. Ffeiffenberger: I would ask the Medico-Legal Committee whether they have done anything further with the establishment of mutual insurance for the Illinois State Medical Society or whether that is going to drop altogether.

Dr. King: I would say, for the information of the House of Delegates, that after the meeting two years ago, at Springfield, the committee took up the matter of mutual insurance and also the matter of re-insurance in the older established liability companies. Dr.

Krohn went into the matter of re-insurance and I looked up the matter of mutual insurance. A brief draft was made at that time and presented the question of mutual insurance to the Chicago Medical Society and was rather promptly sat down on or criticized, and from that time nothing has been done.

Dr. Andy Hall: You know, the members of the State Medical Society pay a certain amount each year that goes towards the medical defense, and the Medical Society defends them, but it pays no judgment in case a judgment should be rendered. While a great many of the men in the Society carry insurance with some other company that pays judgments, the Medical Society has no arrangement with any of these organizations. A great many of our men carry indemnity insurance with the Fort Wayne and with some other companies. Fort Wayne is perhaps carried by most men that carry insurance. Fort Wayne charges \$15 a year and gives you a policy that will cover three malpractices in a year, paying \$2,500 in each suit, if judgment should be rendered in three suits. The Aetna Life Insurance people came to us yesterday. They are writing a policy that will insure you for the amount of \$15,000 a year, paying \$5,000 judgment in each of three cases, should that number be rendered against any physician in one year.

They have proposed that if the Medico-Legal Committee will recommend to the members of the State Medical Society their policy, that they will write this policy to members of our Society for \$15,000 a year, the same as the Fort Wayne is doing. But they want us to keep our defense feature and defend these cases as we are doing and as we propose doing. They will pay for investigation, but they want us to pay for our attorney. We think we have the best defense organization of any society in the country, and we are not willing to put that aside at all. Personally, I think the Aetna Life Insurance proposition is a good one, because the Aetna Life Insurance Co. is a strong institution. They have an unlimited amount of assets, while some of these companies with whom we are insured are sledding on mighty thin ice. If their investments depreciate very much, owing to the war, they will go into the hands of the receiver and we will be left high and dry, but the Aetna Life Insurance Co., as I say, have an unlimited amount of assets, and no matter what occurs, they will probably be able to make good their contracts, and, as one member of the committee, I really favor recommending the Aetna Life Insurance policy to the members of this Society.

Dr. O'Byrne: This matter has been up several times in the House of Delegates. The prices on insurance in Chicago have raised; I don't know how it has been in the country for this indemnity insurance. The old line companies are charging \$25 a year.

Dr. King: Might I just explain that a little further? The proposition that was put up to us is something like this. The Aetna people are charging \$25 for their individual insurance. Their proposition to us was on the group proposition; that is, they will insure no one who is not a member of this Society, if



we accept this proposition. Their first proposition was for \$20 a year, and the committee wouldn't listen to that for a moment. They finally came down to a proposition of \$15 a year, provided the Medico-Legal Committee of the State Society would continue the defense, because they acknowledged to us that we had one of the best lawyers on defense in the State of Illinois. They, however, were to pay all of the expense of investigation of these cases and the preparation of them. Now, that is considerable of an item of expense. For instance, in one case, our attorney went to the City of Denver and took up five days' time just to get some depositions, but those depositions absolutely killed the case. It wound up the case completely, and the lawyer for the plaintiff wrote him a letter and withdrew his case. Now, it costs the Illinois State Medical Society \$225 to defend that man, the cost of the trip to Denver and the five days of time. If we were under this plan there would have been no cost in this case. That cost would have been paid by the insurance company.

The committee felt that even then we would be paying them altogether too much, that our organization and our methods of defense should be worth more than the \$5 that they were lopping off of their policy.

Another point that they raised was this: That where they are selling a policy for \$20 or \$25, it has been their custom to pay for expert testimony, physicians going in to testify for them. That, of course, the Medico-Legal Committee does not pay. We never have been asked by any doctor that was put on the stand or even sent out of town, to pay anything further than his actual expenses. Now, the companies claim that is a very large item of overhead expense, and they want that lopped off. That is the reason they want us to defend these cases, to get away from that expense. I still feel that \$15 is too much money. That is my personal opinion of the case. They asked our committee to sign up a statement. I have still got it in my pocket, and I am not going to sign it right away.

Dr. O'Byrne: I have long believed that this scheme could be worked out; that the doctors could save the agent's fee. The insurance companies pay their agents about 15 per cent. for getting the business. Of course, that item would be cut off and it seems to me that they ought to go in on a fifty-fifty proposition.

Dr. Andy Hall: Fifteen dollars was the best proposition we could get out of them.

Dr. O'Byrne: They ought to make it \$12.50 on a \$25 policy. It seems to me that would be a fair proposition.

Dr. Armstrong: I think you will find, when the question is boiled down, the question of indemnity from the standpoint of the company is purely a commercial proposition, and one point that should be of most importance is the form of the contract. It isn't a matter of whether or not they pay indemnity so much or how many suits they will defend in a year as the broadness of the contract. I have been impressed personally with that fact. I think the

plan suggested should be worked out, but does the Aetna Insurance Co. offer as broad a contract as does the Fort Wayne Co., not that I am in any way interested in the Fort Wayne Co., but their contract is a splendid contract, and I think that that question should be uppermost in our minds.

Dr. King: My impression is that their contract is just as broad at present, possibly one or two points in favor of the Aetna. It would be, if you listened to an Aetna agent talk. I might say that the committee have thought it would be wiser for us to think this over until the July meeting before we go any further on it.

Dr. Burkhardt: I would like to ask a question. Was the understanding that you were to guarantee any certain number of policies on this?

Dr. King: No.

Dr. Burkhardt: It would be voluntary for each member to take the policy if they saw fit?

Dr. King: Yes, and their own agents do the soliciting. I might say that they put up an argument as to the increase in the membership. They cited different counties in different states of the Union in which they had increased the membership of the society; that is, their solicitors had done so. In St. Louis County they claim they made an increase of forty-six members, and yet they got only twenty-eight policies out of the forty-six members they got in. They thought they were handing the society more than they were getting in return. They agree not to insure any one who is not a member of his local or state society. It comes under the group proposition.

Dr. Andy Hall: They will insure any physician for \$25, but at this \$15 rate he must be a member of our organization.

Dr. King: Another point that I might make is that at the present time their organizations throughout this State are working on the basis of \$20 with a group proposition. Now, they agreed yesterday that if we would accept this they would rebate \$5 to the men that have already taken their policy—those men that are members of our Society.

Dr. Dakin: I think the rate of \$15 that they are quoting for this kind of insurance is remarkably cheap for what they are giving. The Aetna Insurance Co. are giving the broadest policy covering hospital liability that I know of. Our hospital is insured in that company. We went to practically every other company in Chicago giving that kind of insurance, and the conditions of their policy are considerably more liberal than any other company, and I think, in consideration of those facts, it ought to be given very serious consideration.

Dr. Gilmore: I wish to make a motion that the entire matter be referred to the Council with power to act. (Seconded and carried.)

Dr. Ferguson: It would seem to me that the Medico-Legal Committee know more about this than the Council, and it seems to me that they should be consulted more in the matter than the Council.

*(Continued on page 40.)*

AUDITOR'S REPORT .

Chicago, July 7, 1917.

Board of Directors,

Illinois State Medical Society.

Gentlemen: We have made an examination of the books of account and records of the ILLINOIS STATE MEDICAL SOCIETY, for the year ended May 16, 1917, and submit herewith our report.

The general fund at May 16, 1916, showed a balance of \$1,897.47. Receipts for the year, exclusive of the income from advertisements, etc., totaled \$9,530.14. The disbursements aggregated \$4,706.51, leaving a balance of \$6,721.10. After deducting from this balance the excess of disbursements over the receipts on THE JOURNAL, the balance in the fund at May 16, 1917, amounted to \$2,170.70.

We present herewith a statement of the cash receipts and disbursements for the period and include the transactions of the Medico Legal Defense Fund. The balance in this fund at May 16, 1917, amounted to \$10,868.40, thus increasing the total in the two funds to \$13,039.10.

We verified these funds by direct communication with the depositories as follows:

Illinois Trust & Savings Bank, Chicago.....\$ 409.27  
Farmers' State Bank, Belvidere..... 12,629.83

\$13,039.10

We have accepted the book figures for the income from advertisements in THE JOURNAL.

The amounts received from the Secretary have been verified by examination of the records kept by that individual, but we have not confirmed the receipts shown in his records by communication with the parties remitting to him.

In our examination of the records we found that all disbursements were supported by canceled bank checks and vouchers on file.

Very truly yours,

ERNST & ERNST,

(Seal) Certified Public Accountants.

CASH RECEIPTS AND DISBURSEMENTS

ILLNOIS STATE MEDICAL SOCIETY

May 16, 1916 to May 16, 1917

GENERAL FUND

May 16, 1916—

Balance on hand .....\$ 1,887.47

RECEIPTS

Subscriptions .....\$ 9,524.35  
Miscellaneous ..... 5.79 9,530.14

\$ 9,530.14 9,530.14

\$11,427.61

DISBURSEMENTS

Councilor Expenses ..... 1,176.74  
Legislative Committee Expenses. 343.78  
Annual Meeting Expenses..... 636.07  
Badges ..... 146.19  
Printing and Stationery..... 533.63  
Stenographer ..... 96.82  
Donation to Preparedness Fund. 50.00  
Picnic Expense ..... 81.07  
Honorarium ..... 300.00  
Medical Education Expenses.... 9.50  
W. H. Gilmore, Salary..... 600.00

W. H. Gilmore's Assistant Salary 300.00  
A. J. Markley, Salary..... 50.00  
Miscellaneous Office Expense .... 382.71

\$ 4,706.51 4,706.51

\$ 6,721.10

JOURNAL

Printing .....\$ 8,685.78  
Stenographer ..... 824.80  
Postage ..... 900.00  
Clippings ..... 45.50  
H. G. Ohls, Salary..... 720.00  
Clyde D. Pence, Salary..... 900.00  
Miscellaneous Expense, including  
Cuts, etc. .... 179.82  
Commissions ..... 902.38

\$13,158.28

Less: Income from Advertise-  
ments, etc. .... 8,607.88 4,550.40

May 16, 1917—

Balance .....\$ 2,170.70

MEDICAL LEGAL DEFENSE FUND

May 16, 1916—

Balance on hand.....\$14,646.97

RECEIPTS

W. H. Gilmore..... 5,659.00

\$20,305.97

DISBURSEMENTS

Legal Services .....\$ 9,016.15  
Traveling Expenses..... 183.48  
Stenographer ..... 108.30  
Printing and Stationery..... 129.64  
9,437.57

May 16, 1917—

Balance ..... 10,868.40

May 16, 1917—

Balance (Both Funds).....\$13,039.10

DISTRIBUTED AS FOLLOWS

Illinois Trust and Savings Bank,  
Chicago .....\$ 409.27  
Farmers State Bank, Belvidere, Ill. 12,629.83 \$13,039.10

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY.

Scientific Meeting, May 16, 1917.

The president, Dr. A. Augustus O'Neill, in the chair.

Dr. Samuel G. Gant, of New York City, gave an illustrated talk on "Suggestions Relative to Certain Recto-Colonic Affections and Operations." In speaking of local anesthesia in connection with the surgical treatment of diseases of the rectum, he stated that many surgeons were now employing it for rectal work, but in New York surgeons were not using it as generally as it should be used, neither did he think the average surgeon was using it as much as he should.

In referring to examinations, he stated that medical men did not examine the rectum as thoroughly as they should. When a patient consulted a physician relative to any lesion he might have, the physician examined the heart, the lungs, the blood, the urine,



etc., but generally neglected as a part of his examination the rectum. There was no reason why any rectal trouble should not be diagnosed if one was careful and used discretion, because every part of the rectum could be made visible, as well as the lower part of the sigmoid flexure. A mistake made by physicians was in thinking that most of the diseases were located in the upper part of the rectum, whereas 90 per cent. of them were situated in the lower one inch and a half of the rectum.

In making a digital examination, if the sphincter muscle and the levator ani muscle were relaxed and gentle pressure was made, one could make an examination without causing a great deal of pain.

In connection with constipation, Lane's kink, Jackson's membrane and ileo-cecal valve incompetence, he said, were overrated.

Constipation was not only a symptom, but also a frequent cause of rectal ailments. The frequency of the stools depended to some extent upon the will and effort of the patient, but more often upon the amount of obstruction offered to the passage of the feces.

*Scientific Meeting, May 23, 1917.*

Dr. E. V. L. Brown read a paper on "The Responsibility of the Medical Profession in the Prevention of Blindness." He said the responsibilities of the profession come into play in the notification of the occurrence of ophthalmia neonatorum or glaucoma, cases in which the school children's eyes are not receiving proper attention and accidents to which employees are being subjected. These come first in many instances through the general practitioner and his responsibility is great because he must see that these things are properly cared for. The Society for the Prevention of Blindness was formed for the purpose of aiding the general practitioner to take the cases before the general clearing house and the particular instances are cared for by one or another agency. The society has made a serious effort to see that the new state law is enforced; there have been a number of prosecutions and there are several pending against general practitioners who have not complied with the law, which requires that all cases of ophthalmia neonatorum, or infantile sore eyes, shall be reported within six hours of its discovery.

Dr. Caroline C. Von Blarcom, secretary, Illinois Society for the Prevention of Blindness, followed with a paper entitled "Functions of a Lay Organization in the Prevention of Blindness." She said that it has been known for thirty-five years that blindness from ophthalmia neonatorum is preventable and curable, that nearly 25 per cent. of the children admitted to the schools for the blind are blind as a result of this disease. Of the forty-one children enrolled in the Chicago School for the Blind twenty-six are blind as a result of ophthalmia neonatorum. The solution of this difficulty rests almost entirely in a publicity campaign and the society regards itself as a link between the medical profession and the lay public that needs the attention. The educational campaign is necessary and certain legal provision to make applicable the things which are advocated. The society felt

that the most important step to take was toward the enforcement of the state law, and that is only secured through prosecutions.

Dr. William H. Wilder spoke on "The Importance of Conservation of School Children's Vision." A great many diseases of the eyes which occur are incident to the abuse of the systems of education which are in vogue, so the Illinois Society for the Prevention of Blindness has assumed as one of its functions the question of educating the board of education to the importance of recognizing their duty in regard to this very thing. He emphasized the point that this society does not assume to take upon itself the responsibility for the prevention of blindness for the community at large, but some organization must undertake to arouse the interest of the public at large to the duty of preventing blindness in the community. Every physician who has studied this subject knows perfectly well what eye strain means and knows that certain forms of eye strain will conduce to all manner of nervous disorders and to the reduction of vision.

Dr. Francis Lane discussed "The Practical Value of the Laboratory in the Prevention of Blindness," saying that the first point to emphasize was that not all cases of ophthalmia neonatorum are gonorrheal; that 25 or 30 per cent. of the total are due to organisms other than the gonococcus. It is interesting to note that gonococci, streptococci and coli communis are among the common organisms found in the genital tracts of women suffering with puerperal fever. Gonococcic blenorhea of both the severe and light cases have a longer duration than those cases resulting from other bacteria, and ulcers of the cornea can occur in both the severe and mild cases of purulent discharge. The gonococcus can be found for days and even weeks in the conjunctival sac after cessation of the discharge; hence the necessity for protracted treatment. He said it was his rule at the infirmary never to discharge a case until at least three negative smears had been obtained within the course of a week.

*Scientific Meeting, June 6, 1917.*

Dr. R. H. Brown read a paper on "Asthma." After stating that asthma rarely comes fully developed from the start, but is preceded by attacks of slight bronchitis, with a tendency to wheezing, the author drew the following conclusions: 1. Asthmatic paroxysms are of the nature of anaphylactic attacks. 2. The underlying cause is sensitization of the system by absorption of protein toxins from bowels or retained secretions in the nose or elsewhere. 3. The exciting cause is the inhalation or ingestion of this protein poison when the system is so sensitized. 4. Nasal irregularities may tend to focus a toxemic attack in the respiratory tract, which might otherwise show in another manner. 5. Thorough treatment of nasal disease or abnormality, with scientific attention to bowel toxemia, cures or prevents the great majority of cases.

Dr. Charles M. Jacobs read a paper entitled "The Operative Treatment of Tuberculosis of the Small Bones." Surgery he said should precede or supplement the older and conservative methods of treatment in tuberculous bone and joint disease. Surgical



methods, however, cannot contribute to the cure of tuberculosis of the large joints without involving a great sacrifice of bone and a crippling deformity, hence the orthopedic surgeon, apparently satisfied with the arrest of the disease in three or four years, generally without deformity, has preferred usually to cling to conservative methods. In certain adult cases, however, radical operation has been recommended in tuberculous bone disease, but in children it has been thought that better results are obtained by conservative treatment.

Dr. John Ritter followed with a paper on "The Course of Tuberculous Disease at Different Ages," and summarized as follows: Tuberculosis in very early life runs a very acute, malignant course, assuming a more subacute form in the middle of child life, and towards puberty becomes more chronic and more benign; and that the involvement of the organs and tissues of the greater circulation, which up to this period were most vulnerable, seems to be less so now, and the organs of the lesser circulation, the lungs, in the second decade, are now chiefly affected.

Dr. Arthur M. Corwin spoke on "Tuberculosis of the Throat," saying that there are rare cases of primary laryngeal tuberculosis, but it is a difficult diagnosis to make because impossible to prove during life even with the absence of pulmonary and other signs, since a hidden, deep-seated focus in a bronchial gland or elsewhere may be the primary cause. Salvation lies in the diagnosis of our patients before laryngeal disease occurs, or early in the prompt use of climate if the prescription can be filled, and those other well known means of building up the patient.

Dr. Maximilian John Hubeny spoke on "The Roentgen Diagnosis of Early Pulmonary Tuberculosis." He drew the following conclusions: 1. The roentgenogram presents certain distinctive characteristics of an early tuberculous lesion. 2. Clinical methods as well as roentgen methods are necessary to differentiate between symptom producing and non-symptom producing tuberculous lesions. 3. The roentgenogram is frequently the only manner of obtaining objective signs of the disease, playing an important role from the standpoint of diagnosis and prognosis.

*Scientific Meeting, June 13, 1917.*

#### A TECHNIC FOR FOREIGN BODY LOCALIZATION.

Dr. J. R. Buchbinder stated that very little attention has been paid to a relatively simple procedure, but one far more accurate than any other method he knows of. He referred to stereoradioscopy aided by "markers," and the identification of sinuses and other fixed landmarks by means of probes and other objects impervious to the rays. The methods he presented is that which for the past four years has been used in the clinic of Dr. H. M. Richter at Wesley Hospital. Its value was unappreciated until they faced the problems presented in hundreds of shell, shrapnel and bullet wounds where rapid and accurate localization was a consideration of prime importance.

A marker in the form of a small piece of lead is fastened by means of adhesive to some point on the skin, usually the wound of entrance, or if there be an exit wound, both. An additional marker is now fixed to the skin overlying and adjacent subcutaneous bony prominence, such as malleolus or the anterior superior iliac spine. The point of contact between skin and marker is designated by the use of an indelible stain, such as fuchsin.

The author described another adjunct to the stereo, namely, the electro-magnet of the non-vibrating type.

Dr. Gustavus M. Blech, major medical corps, commanding Second Illinois Field Hospital, N. G. A. S., read a paper on "The Surgeon's Share in the Winning of Battles," in which he reviewed the professional functions of military surgeons at the front. The regimental surgeon does his share to help win battles, and he does more than his share, not because he can handle a bleeding artery with better technic than an enlisted sanitary soldier, but that by his presence he imparts a feeling of safety to the men on the firing line. The connecting link between the firing line and the field hospitals is the ambulance company. But the ambulance company not only executes the transport of the wounded who cannot walk, but relieves the overworked regimental personnel. The range of surgery that can be and has been done at field hospitals is restricted only by the art of surgery itself. The author emphasized the point that the duties even of a field hospital are primarily to assist in achieving victories and are only secondarily humanitarian.

Dr. George E. Baxter read a paper on "Conservation of Maternal Nursing," in which he drew the following conclusions: 1. Conservation of the breast food in the first two months practically insures breast food for the infant in the second and third periods. 2. The first is the most serious period for the mother and babe. 3. Proper management of environmental conditions should receive most careful and patient consideration. 4. The relative unimportance of the laboratory examination of breast milk. 5. The relative unimportance of the appearance of the stool. 6. The necessity for the physician to recognize that the conservation of the mother's milk can only be accomplished by his careful, earnest and conscientious study of details. 7. The importance of properly regulated mixed feeding as a means of conserving maternal milk.

#### CHICAGO OPHTHALMOLOGICAL SOCIETY.

*Meeting of Nov. 20, 1916—Continued.*

#### THE SPONTANEOUS EXPLOSION OF SNELLEN IMPROVED ARTIFICIAL EYES.

DR. ALEXANDER S. ROCHESTER stated that the phenomenon of the spontaneous explosion of Snellen improved artificial eyes was definitely brought to his attention a few months ago by a report from one of Dr. Casey Wood's patients, which told of having had two different eyes explode within a short space of

time, each accident happening while the eye was being worn in the proper manner. Thinking it might prove interesting and, at the same time, develop some facts of value, a short notice was inserted in the *Ophthalmic Record*, requesting a report on any cases of this kind that might have come under the observation of the readers. In response to this request, the author received twelve replies from different physicians telling of eighteen occurrences of this nature that have happened in their practices.

As to the particulars regarding the circumstances at the time of the explosions, all the cases presented histories of a more or less similar type. The story as told by the patient is generally on the order of the following: He will state that while engaged in some normal occupation or pastime he suddenly heard a report as if a pistol were shot off in close proximity to his head; at the same time he felt a sharp pain in the affected orbit, and on placing his hand to the part found the eyelids covered with blood. Quite naturally he generally tells that he was greatly frightened and immediately consulted his oculist.

The replies from the physicians to whom this series of cases would apply show that none of the orbits sustained serious damage. In 88 per cent of the cases there was some abrasion of the orbital lining membranes, varying from a slight cut which healed in several days, to deep lacerations which required two weeks in healing. From one to ten pieces of broken glass were found, in most of the cases, embedded in the soft tissues, and had to be extracted by the attending doctor. Two of the patients lost consciousness, but this was in each case due entirely to fright and occurred in individuals of a hypersensitive nature.

Quite a number of the patients state that their first impression at the time of the accident was that they had been shot in the eye and even some of the bystanders have heard the report and seeing blood running from the orbit have, for the moment, held the same opinion. Each explosion reported was absolutely spontaneous, there being no cause to which the individual could attribute it.

The receipt of this series of reports has shown that the spontaneous rupture of the Snellen improved eye, while being worn in the orbit, is not a remarkably rare accident. In fact, the author has found, through interviewing one of the large manufacturers of artificial eyes, that during the course of a year they will probably lose 25 eyes by spontaneous explosion, this occurring while the eyes are stored on shelves and from a stock numbering 25,000. This means that one-tenth of one per cent of the improved eyes manufactured may be expected to explode, even though they may be lying quietly packed away and not subjected to the many vicissitudes encountered by the eyes while in use.

In attempting to find the cause of these explosions, the method of manufacture was first studied and the manufacturers themselves interrogated. The makers state that in producing the Snellen improved type, it is absolutely necessary to seal the back of the eye

while the whole ball is at a white heat. This naturally results in a partial vacuum of rather high degree in the interior of the globe, after cooling has taken place. There is, therefore, a continuous pressure being exerted on the outside of the finished eye. If there be a sudden change in the temperature of the globe, or a decided inequality in the temperature of different parts of the globe, the resulting sudden or unequal expansion or contraction renders the glass less strong and, therefore, less able to withstand the continuous atmospheric pressure.

It has been found that most of the explosions have happened either during very hot or very cold weather. In this series of cases at least one-half are said to have happened on exceptionally hot days.

The fact that the globe is built up of many different colors and grades of glass, and that the walls are in the finished state of many different thicknesses, makes the proper annealing of the whole a very difficult problem. This one problem of completely and successfully annealing the eye so that it will be absolutely impervious to all changes and conditions of temperature, is something that has not yet been accomplished by the makers. They state that a great deal of study has been put on the subject during the past years and one large manufacturer states that as soon as the present rush of business, brought about by the great demand from the European battle fields, is past, they will again take up the problem.

The other one deficiency of these eyes, and one which influences the possibility of explosion, is their susceptibility to the destructive effects of orbital discharges of certain patients. It has been found that certain individuals can wear an eye no longer than six months before discoloration and corrosion are seen to have begun. Others can wear the same kind of an eye for two years before any signs of deterioration are seen. The effect of the influence of certain persons' secretions on the glass is shown in this series of cases. Out of eighteen explosions reported, four patients had experienced the accident two distinct times. In other words, out of all the cases reported to have had the improved eye explode while in the orbit, 28 per cent had had a repetition of the phenomenon. When we consider the very small percentage of those wearing artificial eyes who have them explode in their sockets, and then realize that 28 per cent of these who have had the accident occur, have had it occur twice, the conclusion drawn must be that the individual socket exerts a deleterious influence on the glass; the only plausible explanation of this being that it is brought about through the chemical action of the secretions on the globe.

#### DISCUSSION.

Dr. Robert Von Der Heydt related the case of a patient who wore a Snellen eye, but the eye did not explode. In this case, where the socket presented, there was an intractable conjunctivitis which did not respond to any treatment. Presumably the eye may have had a crack in it. The eye was not old. It looked smooth on careful inspection. He held the eye in his hand and in so doing must have exerted a little pressure, when it came apart and emitted an odor which proved that the eye was filled with some liquid and had probably been cracked for a



long time. He thought this case explained some of the forms of conjunctivitis met with in artificial eyes that would not respond to any treatment.

Dr. John A. Pratt, Aurora, said that about six months ago a man came to his office wearing a Snellen eye, and stating that he felt something had happened to it. The patient tried to take it out of the socket, but could not do it. By means of pressure the doctor took it out and found a hole in it about one-third the diameter of the eye, and on account of the vacuum the eye was sucked right in and could not be drawn out by the patient.

Dr. Michael Goldenburg recalled a case in which an artificial eye broke in the orbit, but the occupation of this patient was such as to necessitate his traveling from a warm room into a cold one, like an ice-chest, which might have had something to do with the explosion.

Dr. Rochester, in closing, said the point about the vacuum drawing discharges into the eye was brought to his attention by a maker of these artificial eyes, who states that this one thing produces the symptoms and frequently is the cause for continued irritation. A small crack has occurred in the eye and the eye becomes the seat of an irritating, foul smelling material which keeps up constant irritation.

Dr. C. F. Burkhardt, Effingham, stated that while he had not had trouble with artificial eyes exploding, he recalled two instances which occurred in his office which might have proved more serious than the explosion of an artificial eye. In using glass electrodes he had two of them explode. He was using them at the time in connection with patients, and the accident might have proved dangerous because by the explosion glass was scattered over his operating room. One of the glass electrodes was in a glass case at the time of the explosion. The glass electrode was made similar to the artificial eye, and he presumed the explosion was due to the vacuum.

## THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held in the rooms of the Post-Graduate School of Medicine on November 21st, 1916. The president, Dr. Otis H. Maclay, in the chair.

## FACIAL DEFORMITY RESULTING FROM INJECTIONS OF LIQUID VASELINE

Dr. George E. Shambaugh showed the patient together with photographs taken immediately before and after the injections. The patient thought his face too thin and had about forty injections made in a day. A temporary congestion followed but no other bad results appeared until two years later when relaxation of the muscles and sagging took place, giving the patient's expression a ludicrous appearance. The patient, a waiter, had expected to make a specialty of the same kind of work but the calamity which overtook the efforts on his own face had fortunately kept him away from such work. The question is whether anything can be done now to relieve the condition.

## DISCUSSION

Dr. Norval H. Pierce thought that if hard paraffin had been used there might be a possibility of removing it to some extent, but there was a chance that attempts to remove it might make the face even worse.

Dr. Walter S. Barnes said that someone had made a suggestion that heat might liquify the contents of the injected material and permit its withdrawal with an aspirating needle. Dr. Shambaugh thought that this applied more to the paraffin injections. His impression was that the lumpiness in the

patient's face was more the result of connective tissue developments.

## LEUCOPLAKIA OF THE TONGUE

DR. GEO. W. BOOT presented a case of leucoplakia of the tongue in a man of about 42, a peddler by occupation. The patient had had syphilis twelve years before and had taken treatment for about three months. He had been a smoker, but not to excess. He has had no signs of syphilis since the three months of treatment. He presented himself for treatment because of a small painful spot on the side of the tongue. This had promptly subsided under cleansing mouth washes, though the leucoplakia had been uninfluenced. The leucoplakia occupies chiefly the tip and borders of the tongue. It gives the patient no discomfort. Wassermann reported positive. This case confirms the view that back of leucoplakia stands syphilis as the etiologic factor. The patient has been put on antisyphilitic medication.

## PERICHONDritis OF THE LARYNX

DR. GEO. W. BOOT presented a case of perichondritis of the larynx of unknown etiology. The patient was a butcher, aged 40 years. The trouble has existed for a year. He attributes it to catching cold going in and out of the ice box. He had had a tracheotomy done before coming under Dr. Boot's attention. The wound never completely healed; there remained a fistulous opening discharging pus. This was curetted out. Later swelling inside the larynx required reopening of the tracheotomy wound. When the tracheotomy tube was removed an up and down tube was inserted which was removed after two weeks. The patient did well for a time when granulation tissue above the cords caused so much obstruction to respiration that it was removed by the indirect method. He now has plenty of room between the cords for respiration, but within the last two or three days a swelling has appeared between the epiglottis and the tongue on the left side. This has apparently opened and discharged pus. In this case there is no suspicion of tuberculosis or malignancy.

## CARCINOMA OF THE ESOPHAGUS RUPTURING INTO THE AORTA

DR. GEO. W. BOOT presented a specimen from an elderly man who had come to him for examination with the probable diagnosis of carcinoma of the esophagus. Dr. Boot passed the esophagoscope and found an ulcerating new growth near the middle of the esophagus. There was no bleeding from the examination. Two days later the patient had a sudden profuse hemorrhage and died. Postmortem examination showed an opening about 1 cm. in diameter connecting the esophagus and the aorta. Only great gentleness in making the esophagoscopy could avoid hemorrhage at the time in such cases.

## CARCINOMA OF THE EPIGLOTTIS

DR. GEO. W. BOOT presented a specimen of carcinoma of the throat in which the growth appeared to have



been primary in the epiglottis. The epiglottis was the size of a walnut, the new growth extended out into the right ary-epiglottic fold and right pyriform fossa. The growth in the epiglottis blocked up the entrance of the larynx to such an extent that a tracheotomy was necessary on account of the valvelike action of the epiglottis.

The patient gave a history of having had anti-syphilitic treatment for several months before coming under Dr. Boot's observation. In such a case as this early diagnosis of the nature of the growth and energetic surgical treatment should have made a cure possible.

#### THE TONSIL QUESTION IN CHILDREN

DR. GEO. W. BOOT read a paper on this subject. (Abstract.)

Dr. Boot would have fewer tonsillectomies and better work done. The damage done to the voice and the compensatory enlargement of the lymph nodes in the pharynx are to be considered in recommending tonsillectomy. The following indications may be considered well established:

Tuberculosis of the cervical lymph glands.

Peritonsillar abscess,

Chronic tubal occlusion if the velar lobe is enlarged,

Definite infection of the tonsils in rheumatism, nephritis, endocarditis, etc.

Tonsils unless definitely diseased should not be removed to prevent recurring colds. It is doubtful whether they should be removed to cure chorea. Dr. Boot expects the next generation to have less otosclerosis because their tonsils have been so generally removed.

The coagulability of the blood should always be inquired into before removing tonsils.

Post operative pneumonia and lung abscesses following tonsillectomy should point to greater care in the use of general anesthesia. The anesthetic should never be pushed to the point of abolishment of the laryngeal reflex. It should never be given for an hour or more, nor should it be habitually used in the upright position.

Hypertrophy alone may or may not require tonsillectomy. He lays down the following rules for tonsillectomy:

1. Operate only for definite disease.
2. Be sure the condition of the tonsil is the cause of the disease.
3. Always make a uranalysis before operating under general anesthesia.
4. Always inquire into the possible history of bleeding.
5. If not certain, test the coagulation time of the blood.
6. Don't push the anesthetic to the abolition of the laryngeal reflex.
7. Don't be slow in operating.
8. Don't destroy a functioning organ unless the gain more than offsets the loss.

9. The younger the patient the more carefully the need of tonsillectomy should be established.

#### CLINICAL PROBLEMS RELATING TO THE FAUCIAL TONSILS IN ADULTS.

Dr. George E. Shambaugh read a paper on this subject. (Abstract.)

Until quite recently very little was attempted in the treatment of infected tonsils in adults. One reason was the failure to recognize the serious menace from infected tonsils. Another reason was the unsatisfactory methods formerly at our command for the treatment of tonsil trouble in adults.

The general physician, as well as the throat specialist, has only recently begun to appreciate the serious systemic conditions which owe their origin to infected tonsils. Since we have learned that the tonsils can be safely enucleated in adults we have a thoroughly satisfactory method of treating such tonsils.

It is important that the proper indication for tonsil removal be recognized before this operation is advised. The presence of a systemic infection of focal origin is not in itself an evidence against the tonsil. In cases where the indication for tonsil removal rests chiefly on the local trouble in the pharynx the throat specialist is, as a rule, best able to decide what should be done. Such are the cases of recurring attacks of acute tonsillitis or where enlarged tonsils are filled with masses of cheesy concretions. In the cases where the indication for tonsil operation is the presence of systemic infection and not the local annoyance in the throat, the co-operation of the internist is required to avoid as far as possible the risk of unnecessary operations.

When the systemic infection develops during an attack of acute tonsillitis the indication for tonsil operation is quite clear. In many cases it is necessary first of all for the internist to determine whether the patient's disorder is the result of a systemic infection of focal origin. It is for the internist also to determine what is the probable focus causing the trouble. To the throat specialist belongs the responsibility of determining whether the tonsils are the seat of an infection capable of causing the systemic trouble.

The history of recurring attacks of acute tonsillitis should always throw suspicion on the tonsil as the persistent carrier of infection. An examination of the tonsils will often disclose positive evidence of infection even when there is no history of attacks of tonsillitis or of sore throat. Such evidence is the presence of pus that can be expressed from the tonsil, the presence of a congested area about the tonsil, enlarged tonsils which are fibrous, and tonsils with the pockets filled with cheesy plugs.

It occasionally happens that even where there is no history of sore throat and where no evidence is discovered in examining the tonsils indicating tonsil infection, that the removal of the tonsils will disclose positive evidence of infection which has been causing the systemic trouble. Because such cases do occur

must not be construed as an indication for indiscriminate tonsillectomy. Only when the systemic infection is of a serious character and where a careful search by a competent internist has failed to discover any other probable focus of infection, should the question of removal of the tonsils be considered.

### DISCUSSION

Dr. N. H. Pierce heartily agreed with most of the things said in the two papers. He was happy to see that they condemned the massacre of the tonsils which had been going on. He thought there was no doubt that there had been an enormous amount of unnecessary operations, especially in children. He considered the indications for tonsillectomies in the child to be about the same as those in the adult. He agreed with Dr. Boot that the mere enlargement of a tonsil did not indicate operation. If it is not embedded and not the seat of recurrent attacks of inflammation it should remain in the child. It is remarkable how small a mortality there is in tonsillar operations but he is quite sure that we do not accurately know the mortality. He believed we should be very circumspect in recommending any operation on the tonsil.

He thought Dr. Shambaugh had handled the question as to the indications in adults suffering from focal infections in a masterly manner. He said that internists frequently send patients to specialists for removal of the tonsils because they have been unable to find any other focus of infection to account for a neuritis or a rheumatic type of disease; therefore the tonsils must bear the brunt of suspicion. The specialist carefully examines the tonsils and finds no manifestation of disease. Should we yield to the internist and remove these tonsils? He has yet to see in such cases any benefit from such operations. It is probably true, although he had never seen such a case, that tonsils had been removed in cases with focal infection symptoms, in which the tonsils before operation exhibited no sign of the inflammation, yet the operator has found at the base of the tonsil, absolutely sequestered, a small abscess.

He differed with Dr. Boot's remarks as to the depth of anesthesia. He believes it is infinitely safer for the patient and more agreeable for the operator if the anesthesia is sufficiently deep to abolish the pharyngeal reflexes.

He considers the presence of cheesy deposits one of the main causes for removal of the tonsils. He has yet to see a good singer hurt in any way by a tonsillectomy well performed.

Dr. Elmer L. Kenyon said that his study of forty or fifty tonsillectomized throats of different operators had disclosed a remarkable number of permanently nasalized voices, due to the adhesion of the palato-pharyngeus muscle to the outer wall, and the consequent holding down of the soft palate, so that it could not reach the posterior pharyngeal wall on phonation. This was a serious matter. He believed that the future development in this field lay in the direction of having at the physician's disposal not one, but two, technical operative procedures; one the operation which we do, and the other a conservative but thorough operation which reduced the danger of death from hemorrhage practically to nothing, and which also invited no danger of serious injury to the contiguous muscular structures.

Dr. Louis Ostrom (Rock Island, Illinois), said he would like to relieve his mind and also present a grievance. He had had great difficulty in having a modification of the Sluder instrument made because the idea of the dull blade had recently been patented. There had been many men in the society who had modified instruments but he did not know that anyone had ever taken out a patent on a modification. His protest is that it is not, in his judgment, fair that anyone now should patent Ballenger's original idea without giving him any credit. He is now able to have his modified Sluder-Sauer made, but it took a fight with the instrument maker.

Dr. Ostrom demonstrated a modification of the Cushing-Crowe silver clip which he has used with great success. He considered it the nicest little device for controlling hemorrhage that he knew of.

Dr. H. F. Helmholtz had come to the meeting to get the opinions of the men as to tonsillectomies in infancy and childhood. He thought that pediatricians as a rule are conservative

in their recommendations of tonsillectomies. He thought the difficulty has come rather from the side of the parents. He finds that his cases group themselves into cases where he absolutely recommends that the tonsils must come out and those cases where it is a difficult matter to make any decision.

Regarding the question of the removal of the tonsils within the first two years of life, he had had a number of cases where the child had to be sent to a specialist a second time because the first time the specialist said the child was too young to have them taken out. One should consider that the younger the child the more likely the lymphoid tissue is to develop; but in infants where there have been recurring attacks of follicular tonsillitis there has been tremendous improvement in the general condition of the child after removal of the tonsils.

Dr. C. H. Long said that Dr. Boot referred to the time of removal of tonsils with enlarged cervical glands which were probably due to tuberculosis without any lung focus. It has been his habit to remove these tonsils and give tuberculin afterward. Dr. O. W. McMichael had told him that he gave tuberculin first and afterward removed the tonsils.

In February, 1916, he did a tonsillectomy upon a teacher who had exceedingly large cervical glands. He expected to use tuberculin during her summer vacation but the glands disappeared without it. The tuberculin test had been strongly positive.

He thought the dentist should be added to the list of specialists. When adults are referred to him by internists and there is any question about the tonsil being the source of the focal infection, he has the dentist exclude the teeth as a possible focus. The tonsils are then only removed when there can be no other cause discovered. The X-ray frequently indicates a root abscess when the patient had no complaint of the teeth.

Dr. H. I. Lillie was much interested in Dr. Boot's assertion that the upright position in tonsil operations should be condemned. He thought the advantages of this position were numerous; you see the tonsils in the same relation as when you examine the throat, the bleeding does not seem to be as great as in the recumbent position, the tongue does not interfere so much and the bleeding is easily controlled. In a series of cases in the upright position it can be shown that there is no more blood in the larynx in this position than in the recumbent position. The blood goes down the pyriform fossae and esophagus more easily than it does into the larynx.

Dr. Lillie believed the stay of the patient in the hospital after a tonsillectomy is insufficient. Twenty-four hours is the time ordinarily recommended, but he believed the time will come when this will be increased to three days at least. In that time a lung infection or embolus will show up.

He thought it was surprising to note the percentage of tuberculous tonsils in operated cases. In a series of nearly 4,700 it had been discovered that 7 per cent showed tubercular foci, the giant cell infiltration with occasionally tubercle bacilli.

Dr. Alfred Lewy said that Dr. Shambaugh had in a previous paper called attention to tonsillar infection and lesions of the eighth nerve. He would like to ask under what conditions in cases of nerve deafness he would advocate removal of the tonsils.

Dr. George E. Baxter said he had come to learn something about the attitude of specialists in nose and throat work in connection with tonsillectomies in children. He had been much pleased with the general sentiment of conservatism. There is a tremendous field for observation and conclusions as to the morbidity in children following an operation, which naturally belongs to the pediatrician. Not until a large group of cases studied over a period of years is observed can we arrive at the proper indication for and position of tonsillectomy in the child.

He felt, also, that too little cognizance was taken of post-nasal tonsils. This will admit of much more study before coming to a definite understanding as to just what is best to do about tonsils and adenoids in young children and infants.

Dr. W. A. Mann said he had listened with great interest to the discussion of the papers and agreed with most of the statements. He thought specialists were very careful about removing tonsils unnecessarily. He believed that where there was any evidence at all of infection it was a good thing to remove



the tonsils as a matter of prevention. If the operation is properly done it will do no harm and may do a lot of good.

Dr. A. R. Elliott said that he felt a great interest in the tonsil problem. He thought that the tonsils should be removed where they appeared to be pathological and in all individuals who have valvular disease irrespective of whether the endocarditis can be traced to the preceding tonsillar infection or not.

Regarding the removal of the tonsils in chronic internal disease, we have often to include the tonsil under the doctrine of the importance of focal infection. He entirely agreed with Dr. Pierce that where the tonsils had been removed simply as a last resort, without there being some obvious reason other than to serve an end, no good was accomplished. The removal of tonsils from which can be expressed purulent or sero-purulent material, or tonsils which are the seat of recurrent infections, is of the greatest benefit and results in much improvement.

Dr. Boot, in closing the discussion, said he was glad the members of the society agreed with him so well. He regretted that he and Dr. Pierce could not agree about the tonsil always showing external evidence of disease. He had seen several tonsils where there was no external evidence of disease, yet when the tonsil was being removed it broke open and showed that it held an abscess. These tonsils were enlarged but pus could not be expressed from them prior to operation.

As to the depth of the anesthesia, he was sure it was of great importance. If we abolish the laryngeal reflex during operations we open up the way for inhalation of infectious material. He was sure that lung abscesses are caused by the inhalation of such material.

He thought Dr. Kenyon was right. No matter how carefully the operation is done there is bound to be a considerable scar and if the palato-pharyngeus muscle is caught in this scar there is sure to be damage.

He had seen Dr. Ostrom operate by the use of his new instruments and there was not so much as a drop of blood lost. His chief objection to the method is that if the instruments are used and left on for fifteen minutes more anesthetic is required than would otherwise be used.

If all men who refer patients to the throat specialist were as careful as Dr. Helmholz we would have no quarrel with them about who should be operated upon.

As to the method of anesthesia, at the Children's Memorial Hospital they use an ordinary paper cone with a towel around it and a little gauze inside. This is the method he prefers. Dr. Lillie uses a metal cone which is very similar. He does not like ether given for tonsillectomy by the drop method. The anesthetic is of great importance and the more rapidly the patient is put to sleep the less anesthetic is required and the less time the ether has to become fixed in the tissues.

Dr. Shambaugh, in closing, said that the discussions had touched very little upon questions presented in his paper. The problem for the throat specialists is to decide whether the tonsils are infected in cases of systemic infection. This can often be determined from the history; as, for example, where there has been an acute tonsillitis complicated by rheumatism, endocarditis or Bright's disease. In most of the cases, however, the onset of the systemic trouble is not associated definitely with acute tonsillitis. He stated that he had seen a patient this morning whose tonsils he had removed three years ago because of persistent neuritis of the brachial nerves on both sides. The trouble began in childhood and the woman was not forty-five. The suffering had been much worse in recent years. During this period she had had no tonsillitis but was subject to it in early childhood. The tonsils showed no superficial evidence of infection, but after removal a number of small abscesses were found in the depths of the tonsil, containing streptococcus viridens. Within six weeks after removal of the tonsils the neuritis disappeared and she has had no return. He recalled another case on which he had operated several years ago because of persistent neuritis of the right arm of ten years' duration. The patient had never had tonsillitis or sore throat and no evidence of infection could be detected about the tonsil; not even the cheesy plugs in the crypts had been discovered. The operation was performed on the advice of the internists because no other focus was detected. While operating a small abscess in the left tonsil was opened. The patient has made a complete recovery and has had no return

of the neuritis. These are the most difficult cases to handle, where the tonsils show no evidence of persistent infection and where there is nothing in the history that would throw suspicion upon the tonsils.

As to relationship between nasal infection and tonsillitis, it is entirely possible that a chronic accessory sinus infection may constitute the carrier of infection, which could cause recurring attacks of acute tonsillitis. It is much more frequent, however, to find the reverse true. Patients suffer from recurring infectious head colds because of the persistent infection in the faucial tonsils. The removal of the infected tonsils often puts a stop to this tendency.

Dr. Shambaugh was asked to say something about indications for tonsil operation in cases of neuritis of the eighth nerve. In reply he stated that a degenerative neuritis of the eighth nerve is responsible for a great many cases of nerve deafness, and especially for those cases where attacks of vertigo occur. Formerly these attacks were supposed to be due to hemorrhage into the labyrinth, or to a condition of angio-neurosis. Neuritis of the eighth nerve occurs as a sequel of the acute infectious fevers. Occasionally it results from drug poisoning, tobacco or alcohol, but very often there is no apparent cause, and it is the opinion of the speaker that in these latter cases focal infection may frequently be the cause of the degenerative process in the eighth nerve, producing nerve deafness and tinnitus aurium, punctuated often by attacks of acute exacerbation, during which vertigo will be a symptom, provided the vestibular nerve is involved. In cases of chronic progressive nerve deafness, where a degenerative neuritis of the eighth nerve seems to be the cause, the case should be examined for possible foci of infection. If the tonsils are found distinctly infected we should be guided as to their removal exactly as in cases of neuritis involving other nerves.

## GREENE COUNTY

The April meeting of the Green County Medical Society was held in the Sunday school room of the M. E. church at Roodhouse, on Friday, April 13, 1917.

The Society was called to order by President O. L. Edwards at 12:15 p. m. The minutes of the last regular meeting were read and approved.

After listening to reasons given by the Secretary why the proceedings of the Greene County Medical Society do not appear in the ILLINOIS MEDICAL JOURNAL, the Society entertained a motion by Dr. H. Burns "that the Secretary be empowered to procure any and all stationary needed and procure the services of a stenographer for reporting meetings to the STATE JOURNAL." Upon vote of the Society the motion carried.

Drs. W. C. Tunison of White Hall and L. O. Hamilton of Roodhouse were elected to membership.

Five members of this Society having been reported by the State Society for back dues in 1916, it was moved by Dr. Burns "that the physicians reported for back dues be notified and the matter adjusted by the Secretary at the earliest convenient date." Motion carried.

A motion to adjourn being in order, the Society adjourned for dinner at 12:30, to convene at the City Hall.

Dinner was served in the basement of the M. E. church by the Ladies' Aid Society, and the repast was of exceptional merit.

The Society convened at the City Hall at 1:10 p. m., with President Edwards in the chair.

Regarding communication from President James,



University of Illinois, relating to the taking up of post-graduate lectures by the county societies, there was a motion by Dr. McLaren "that the Secretary obtain from the University of Illinois and the Peoria Medical Society, where said lectures have been in progress, more specific information regarding the lectures." Motion carried.

A communication from the Illinois Osteopathic Association was read and upon motion by Dr. Peek the Society voted to register its opposition to the Osteopathic House Bill with Senator Cannaday of Hillsboro.

Upon motion of Dr. Burns, which carried, the Secretary was instructed to reply to the above osteopathic communication, stating the opposition of the Greene County Medical Society to the practice of osteopathy, and further, that we, said Society, do not recognize any such form of practice as osteopathy.

In regard to the matter of medical defense, as handled by the State Society through the local Society, a motion was passed commending the Secretary and desiring him to continue, using his best judgment in all urgent matters which may be up to the Society to decide.

Because of the reluctance of some members to give papers before the Society, the matter was presented and thoroughly discussed. Upon motion by Dr. Burns, which passed, the matter of program was left to the discretion of the Program Committee to use such means as is necessary in getting each member of the Society to do his part.

The paper of Dr. E. W. Fenity was postponed to the next regular meeting on account of lack of time for preparation.

The following papers were read:

"Pertussis".....Dr. G. W. Burns, White Hall, Ill.

A motion by Dr. McLaren "that the papers and case report be given before the discussion be opened." Motion carried.

"The General Practitioner as an Oculist".....

.....Dr. F. H. Russell, Eldred, Ill.

"Case Report of Streptococcus Infection".....

.....Dr. H. W. Smith, Roodhouse, Ill.

Discussion of the papers followed.

The name of Dr. C. R. Bates was presented and he was elected to membership by transfer from Mercer County.

A business card (advertising medium) of a Dr. Goodell, of Effingham, was read and, upon vote of the Society, the Secretary was instructed to send said card or a copy of same to the *Journal A. M. A.* for its "Tonic and Sedative" columns.

Fifteen members were present.

Censors reported the next place of meeting at Eldred, Ill., June 8, 1917.

Upon motion, the Society adjourned.

L. O. FRECH, *Secretary.*

#### *Meeting, June 8, 1917*

The June meeting of the Greene County Medical Society was held at the home of Dr. F. H. Russell in Eldred, Ill., on Friday, June 8, 1917.

Dinner was served at the Royal Neighbors' Hall by

Mrs. Russell, at 12:30 p. m., not the variety to which the Society is accustomed, but "a bountiful feast," the same brand the Society always gets in Eldred.

The Society was called to order by President Edwards at 1:15 p. m., in the yard of the Russell home. The minutes of the last regular meeting were read and approved.

The following question was asked the Society by Dr. Chapman, "Is it legal for an osteopath to use a catheter?" The question receiving no answer, a motion was made by Dr. Chapman "that the Secretary ascertain if an osteopath can legally use a catheter; also how much latitude an osteopath has in the practice of his cult." Upon vote, the motion carried.

Upon motion of Dr. Burns, the Society voted to accept any resolution adopted by the Illinois State Medical Society or the American Medical Association and put same into practice, regarding the caring for practices of physicians, members of this Society, who have left their practice and accepted their country's call to the front.

A communication from Dr. W. H. Gilmore, Secretary of the State Society, in answer to a protest made by this Society in regard to the appointment on the County Registration Board of a physician who has been expelled from the Greene County Medical Society, was read.

The following program was carried out:

"Blood Transfusion and Its Therapeutic Value"...

.....Dr. Elmo P. Porterfield, St. Louis, Mo.  
"Medical Ethics".....Open discussion

The papers of Dr. Fenity and Dr. Campbell were not read because of absence of the above members.

The application of Dr. Robert Mekemson, of Eldred, was presented for membership.

The Censors being absent, the President appointed Drs. Chapman, H. Burns and Thomas to act in their stead.

Fifteen members were present.

The Censors reported the next meeting to be held in Hillview, Friday, August 10, 1917, providing same can be arranged with the Hillview physicians, and if not, the meeting will go to Greenfield.

Upon motion, the Society adjourned.

L. O. FRECH, *Secretary.*

### IROQUOIS-FORD COUNTY

The regular quarterly meeting of the Iroquois-Ford County Society, June 12, was a banquet in honor of Dr. D. W. Miller of Gilman, and was followed by a dance at Odd Fellows' Hall, Gilman. The following program was enjoyed by the members and their "better halves":

#### BANQUET PROGRAM

Toastmaster.....T. N. Boue, M. D., Loda  
To Dr. Miller, Guest of Honor.....

.....S. M. Wylie, M. D., Paxton  
Response.....D. W. Miller, M. D., Gilman

"The Medical Profession".....O. O. Hall, M. D., Milford

Address.....R. E. McKenzie, M. D., Gilman

Address.....N. E. Stevens, M. D., Clifton

**MADISON COUNTY***Sixth Annual Banquet*

For six consecutive years this Society has held a banquet in the first week of May. This year was not an exception and the festivities as arranged by the committee were marked by a spirit of harmony and good fellowship and proved entertaining and profitable.

More than forty guests assembled at the St. James Hotel at Edwardsville on May 1, and full justice was done to the good food, offered in abundance, well prepared and well served. Small United States flags served as favors and beautiful flowers and enchanting music added brilliance to the scene.

After the inner man was satisfied, Dr. W. E. Leighton, of St. Louis, gave a most interesting lecture on "Surgery of Trench Warfare," illustrated by more than one hundred sliding pictures.

It was without doubt one of the most practical and instructive addresses ever delivered before this Society and was thoroughly enjoyed by all present. A hearty vote of thanks was tendered the speaker.

**SAINT CLAIR COUNTY**

The regular monthly meeting of Saint Clair County Medical Society was held at Priester's Park on June 8, with the President, Dr. J. H. Fulgham, in the chair.

The following resolutions were unanimously adopted:

WHEREAS, A number of our colleagues have entered, or are about to enter, upon a sacred duty in behalf of the United States government; and,

WHEREAS, We recognize to the full extent the sacrifices such patriotic duty involves; and,

WHEREAS, The surrender of an established private practice, even though the term be short, necessarily results in a permanent loss; and,

WHEREAS, The term of service in the present conflict is of uncertain duration; therefore, be it

*Resolved*, By the Saint Clair County Medical Society, that it hereby pledges its hearty support of the government in this hour of grave trial; that it offers its services, individually and collectively, free to the dependents of our patriotic colleagues during the time of their service for our common country; and be it further

*Resolved*, That when called upon to treat the clientele of patriotic members during their absence, we keep in mind that the absentee is giving his services for the common good, and that, so far as possible, the good opinion and esteem in which he is held shall be maintained, and that upon his return such clientele shall be encouraged to call upon him for further professional attendance; and be it further

*Resolved*, That 50 per cent of the receipts from the clientele of such absent member be paid over to his family; and be it further

*Resolved*, That for six months after the return of the absent physician we refuse to treat his old patients, but urge them to return to him.

On motion, a committee of three was appointed to

select five members to serve on the five exemption boards in this county and submit these names to the governor.

Dr. J. W. Kraemer was elected a member of this Society.

The Society then adjourned, subject to the call of the President.

A. E. HANSING, *Secretary*.

**WOODFORD COUNTY**

The Woodford County Medical Society met in annual session in the court house at Eureka, Tuesday, May 15, at 10 a. m. President W. C. Cotton in the chair.

Six members and two visitors were present.

The following officers were elected for the coming year: President, W. D. Madison, of Roanoke; vice-president, S. M. Burdon, of Low Point; secretary-treasurer, H. A. Millard, of Minonk; Censor for three years, J. I. Knoblauch, of Metamora; legal representative, F. W. Nickel, of Eureka; delegate for two years, F. W. Nickel, of Eureka; alternate delegate for two years, W. C. Cotton, of Benson.

Various topics of interest to the profession were discussed. Dr. E. S. Gillespie, councilor of this district, gave an interesting account of the work done the past year by the State Society along legislative and educational lines. It was decided that the next meeting of the Society should be a clinical one and that it be held in Minonk. Adjourned.

H. A. MILLARD, *Secretary*.

**Personals**

Dr. H. S. Worthley, Joliet, is said to have a severe infection of the arm.

Dr. C. B. Horrell addressed the Galesburg City Medical Association, June 14, on "The Power of Leadership."

Dr. Arthur Dean Bevan was elected president of the American Medical Association at the New York meeting.

Dr. Luther H. Maloney, formerly of Savanna, has been appointed medical director of the Rockefeller Municipal Sanatorium.

Dr. Henry O. Hart addressed the Austin branch of the West Suburban Hospital auxiliary on "The Infant Welfare Problem" June 6.

Dr. C. D. Gulick, Urbana, underwent an emergency operation for appendicitis on June 10, and is reported making a good recovery.

Dr. Frederick Besley, Chicago, and his staff of the Base Hospital No. 12, were guests of Sir Thomas Lipton at his country estate near London.

Dwight Chace Gigworth, recently graduated



from Rush, is the sixth member of the family to get a Rush sheepskin in the past fifty-four years.

Freeport physicians' offices have been robbed of opiates on several recent occasions. Dr. J. J. Grant's medicine case was rifled in his automobile.

Dr. B. H. Breakstone, Chicago, has filed suit for \$100,000 against Dr. John A. Hornsby, receiver of the Maimonides Hospital, for libel and slander.

Lieut. J. G. Maxon, M. C., U. S. R., Harvard, was given a farewell reception in Harvard, May 26. Dr. Maxon sailed for his new post of duty in Hawaii, June 5.

Pro-German agitators will give Dr. F. M. Hart of Harrisburg a wide birth when they hear what happened to one, B. S. Smart, who probably "smarts" yet from the Doctor's "treatment."

Dr. Ernest L. McEwen was re-elected president of the Rush Class of 1897 at the annual banquet.

Dr. Carl Black, Jacksonville, was elected president of Northwestern University Medical School Alumni at the annual meeting.

Dr. A. W. Swift, former mayor of Belvidere and president of Boone County Medical Society, has retired from practice after thirty-two years. Dr. F. S. Whitman, who has been associated with him, will continue the practice.

Michael Henry Flynn, senior student in Rush Medical College and an intern in St. Joseph's Hospital, who fainted and fell fracturing his skull, while assisting in an operation at the hospital, May 24, died in the institution a week later.

The commencement exercises of Rush Medical College were held in Mandel Hall of the University of Chicago, June 13. The commencement address was delivered by Prof. Elias Potter Lyon of the University of Minnesota. Eighty-six degrees were conferred.

Major Mathew A. Reasoner, M. C., U. S. Army, has been relieved from duty at the Army Medical School, Washington, D. C., and ordered to Chicago to establish a medical supply depot for the central department. The building for the depot has been leased at 3920 Federal street.

Dr. Julius H. Hess, Chicago, has been appointed professor and head of the division of Diseases of Children in the University of Illinois

College of Medicine, and chief of the department of Diseases of Children in Cook County Hospital. Associated with Dr. Hess is Dr. Jesse R. Gerstley.

Dr. W. M. Hanna, Aurora, was re-elected medical director at the annual meeting of Illinois encampment, Grand Army of the Republic.

Dr. F. M. Pottenger, Monrovia, California, addressed a joint meeting of the Rock Island and Scott County Medical societies at Davenport, on "Tuberculosis," June 11.

Dr. Frank Billings, Chicago, as head of a commission to Russia on sanitation, health conditions, food problems and transportation, left Chicago, June 30. In the party of twenty-five, were Drs. Wilbur E. Post, Chicago; W. S. Thayer, Johns Hopkins University; P. McGrath, Philadelphia, and Prof. Winslow, of Yale; Raymond Robbins and Harold H. Swift of Chicago.

---

## News Notes

—Base Hospital Number 12, of Northwestern University Medical School, has taken over British general hospital No. 18, as reported by the Associated Press.

—At the meeting of the Physicians' Club of Chicago, May 24, Judge Kenesaw M. Landis urged every citizen to stand squarely behind the nation in this crisis.

—The second session of the Graduate Summer Quarter in the College of Medicine of the University of Illinois will open June 20, to be continued until September 12.

—The Madison County (Ill.) Medical Society reports that twenty-five physicians and nine dentists from that county have applied for commissions in the reserve corps of the army.

—President Judson has announced that the funds for the establishment of the University of Chicago's great medical school amount to \$14,961,500, an amount greater than the estimated cost.

—The Peoria Tuberculosis Council at its meeting, May 12, awarded contracts for the construction of the sanatorium to be erected on the site recently purchased for \$10,000. The buildings will cost about \$49,000.

—The Peoria Medical Society voted to purchase \$500 Liberty Bond. At the same meeting



Dr. F. M. Meixner read a paper on "Values in Tuberculosis." Dr. H. W. Long, of Elmwood, read a paper on "Psychotherapy in Obstetrics."

—At the annual meeting of the Illinois County Secretaries Association at Bloomington, May 8, Dr. Flint Bondurant, Cairo, was elected president; Dr. Thomas D. Doan, Scottville, vice-president, and Dr. Fernando C. Gale, Pekin, secretary.

—The Post-Graduate Medical School, plans to erect two additions to its present buildings, at a cost of more than \$125,000. The buildings are to be a six story addition to the present hospital and a two or three story addition to the nurses' home.

—The Chicago Society of Internal Medicine held its eighteenth annual meeting in the Northwestern University building, May 28. Papers were read by Drs. Peter Bassoe, Charles Spencer Williamson, F. M. Smith, James B. Herrick and Walter W. Hamburger.

—At the last annual meeting of the Rush Medical College Alumni Association, the following officers were elected: President, Dr. Oliver S. Ormsby, Chicago; secretary, Dr. Charles A. Parker, Chicago; treasurer, Dr. Elmer L. Kenyon, Chicago; directors, Drs. Asher Sippy and W. N. Duncan, Chicago.

—Members of the Council of National Defense have broached the subject of compulsory draft physicians for medical service at the front. It is said that no physicians under 54 years of age remain in England except those attached to military hospitals, all the rest under 54 having been sent to France or other battle areas.

—At the annual meeting of the Chicago Surgical Society, June 15, an address was made by Col. T. H. Goodwin, surgeon-general, R. A. M. C., and the following officers were elected: President, Dr. Carl Beck; vice-president, Dr. Coleman G. Buford, and secretary-treasurer, Dr. Kellogg Speed.

—Dr. George W. McCoy, of the U. S. Public Health Service and Dr. Ludwig Hektoen of Chicago are collaborating with Medical Inspector C. M. DeValin to make Great Lakes station safe from a sanitary and health standpoint. With the assistance of the government laboratory car and staff over 5,000 cultures were examined for meningitis germs.

—A committee has been appointed to provide bronze memorial tablets to be placed in the Illinois Training School for Nurses and in the Evanston Hospital, in memory of Miss Helen Burnett Wood and Mrs. Edith Ayres, nurses, who were killed by a shell explosion while en route to France. The body of Miss Wood was brought to Evanston and buried with military honors, May 23.

—The Alumni Association of the Northwestern University Medical School held its annual meeting in Chicago, June 11, under the presidency of Dr. James H. Stowell, and elected the following officers: President, Dr. Carl E. Black, Jacksonville; vice-president, Dr. Victor D. Lespinasse, Chicago; secretary, Dr. Leo G. Dwan, Chicago (re-elected), and necrologist, Dr. Samuel C. Stanton, Chicago (re-elected).

—The Chicago unit of the American Physicians' Expedition, which has been stationed for the last year at Graudenz, left Berlin, June 2, for Christiana, on its return to America. Dr. Frederick Hagler, St. Louis, is director of the unit. The unit was financed by the German-Austro-Hungarian Relief Committee, and having finished its work, donated the remainder of its equipment, brought from the United States to the hospital at Graudenz.

—On account of rumors regarding the sanitary conditions at the Naval Training Station, Great Lakes, Dr. Frank Billings, chairman of the Illinois State Council for Defense, made an inspection of the station, May 30. He made a thorough inspection of buildings, both old and new, examined the official statistics and conversed with officers and men. Less than one-half of 1 per cent. of the sailors that have passed through the station have been affected with meningitis and there has been no case of typhoid fever in the camp.

—Lieut.-Col. Jacob Frank, surgeon-general of Illinois, has worked out a thorough and comprehensive plan, whereby physicians, dentists, druggists, nurses and hospitals will co-operate in furnishing free service to the needy families of men from Chicago who have entered the military service. The plan contemplates the division of the city into districts, in each of which physicians, who on account of age or for other reasons are disqualified for active service in the field, may render service.

—The members of the Decatur Medical Society at a banquet, June 11, in honor of Drs. J. T. McDavid and A. F. Wilhelmy, assigned to active service, adopted the following resolutions:

"Whereas, several members of this society have at great sacrifice to themselves and families volunteered for service in the medical division of the army of the United States; therefore be it

*Resolved* by the members of the Decatur Medical Society that in appreciation of their loyal service the members of this society pledge themselves to use every endeavor to protect the practice of members absent on war duty and to turn in to the secretary of this society at the end of each month one-half the net collections from such patients for the absent member or his family.

—Champaign County Medical Society passed following resolution, June 14:

"In view of the fact that numerous members of our medical profession, and some of the best men in it, have given up their work along with several times the remuneration received while working for the government, we physicians, who are not called, desire to state to the public that it is our wish and desire that those individuals, who prior to the departure of these men to the front, have employed them as their family physicians, consider themselves as honor bound to do so when they return to us again.

"Of course, we realize that every one has the right to employ just whom he pleases and naturally some will become attached to the physician, who is employed during the absence of these men, but since these men have given their time, along with great financial loss and possibility their lives to their country, it is up to the community at large to sacrifice something for them regardless of feelings in the matter."

## Marriages

RAYMOND FESER, M. D., Chicago, to Miss Anita Choeco, May 23.

EMANUEL FRIEND, M. D., to Miss Magdalene Alexander, both of Chicago, May 26.

PERRY GILBERT LUSH, M. D., to Miss Mayme Holpunch, both of Chicago, May 9.

STEWART J. NIBLICK, M. D., to Miss Elizabeth Janet McLuckie, both of Chicago, June 6.

GEORGE NATHANIEL PRATT, M. D., to Mrs. Catherine Margaret Sawyer, both of Chicago, June 9.

EDMUND JOSEPH BURKE, M. D., La Salle, Ill., to Miss Millie Christianson of Ettrig, Wis., at Chicago, May 28.

## Deaths

GEORGE B. ABBOTT, Chicago; Northwestern University Medical School, Chicago, 1878; aged 60; died at his home, June 15.

ANDREW FULLER HARRIS, M. D., Chicago; Hahne-mann Medical College, Chicago, 1884; aged 61; died at his home, June 15, from cerebral hemorrhage.

JONATHAN L. PLUMMER, M. D., Peoria, Ill.; St. Louis College of Physicians and Surgeons, 1898; aged 69; a resident of Peoria for forty-six years; died in McLean, Texas, May 16.

WILLIAM DE H. REEDER, M. D., Chicago; University of Nashville, Tenn., 1865; aged 75; surgeon of the Fifteenth Pennsylvania Volunteer Cavalry during the Civil War; died at his home, May 19.

ALEXANDER LOEW, M. D., Chicago; University of Vienna, Austria, 1868; aged 70; formerly a Fellow of the American Medical Association; a member of the Illinois State Medical Society; died at his home, May 11.

JOHN W. SPEAR, M. D., Mason City, Ill.; Rush Medical College, 1875; aged 68; a Fellow of the American Medical Association; for many years local surgeon for the Illinois Central Railway; died at his home, May 5.

JOHN O. HOBBS, M. D., Chicago; Northwestern University Medical School, Chicago, 1872; for several years professor of anatomy in the Northwestern University Woman's Medical School, Chicago; died at his home, June 21, from heart disease.

WILLIAM C. ROHU, M. D., Chicago; Bennett Medical College, Chicago, 1891; aged 64; formerly a Fellow of the American Medical Association; for seventeen years in charge of the dispensary of the Passavant Memorial Hospital, Chicago; died at his home, May 20, from diabetes.

ALBERT HARRIS HOY, M. D., Chicago; Medical College of Ohio, Cincinnati, 1864; Rush Medical College, 1866; aged 74; for many years a practitioner of Chicago, but latterly a resident of England; a medical cadet and later acting assistant surgeon, U. S. Army, during the Civil War; formerly a member of the State Medical Society of Wisconsin; who had been in ill health for a long time and whose condition had been rendered more grave by the shock due to the death of his wife and daughter in the sinking of the Cunard steamer *Laconia* in February last by a German submarine died in London, June 9, from heart disease.



## NOTICE.

The Surgeon General of the U. S. Army has instructed Capt. W. H. Gilmore, M. O. R. C., and First Lieut. T. P. Ward, M. O. R. C., to receive applications and hold examinations for appointment in the Medical Officers' Reserve Corps of the United States Army at the following places:

- Marion, Ill., office Dr. H. A. Felts, July 2.  
 Carbondale, Ill., office Dr. W. A. Brandon, July 3.  
 Evansville, Ind., Walker hospital, July 5 and 6.  
 Carmi, Ill., office Dr. F. C. Sibley, July 7.  
 Robinson, Ill., office Dr. C. E. Price, July 8.  
 Paris, Ill., office Dr. G. H. Hunt, July 9.  
 Danville, Ill., office Dr. E. B. Coolley, July 10 and 11.  
 Moline, Ill., office Dr. A. H. Arp, July 13.  
 Rock Island, office Dr. J. R. Hollowbush, July 14.  
 Freeport, Ill., office Dr. D. G. Smith, July 15.  
 Rockford, Ill., office Dr. C. M. Ranseen, July 16.  
 Elgin, Ill., office Dr. L. J. Hughes, July 17.  
 Quincy, Ill., July 19.

---

**Book Notices**


---

**EYE, EAR, NOSE AND THROAT.** By Howard Charles Ballenger, M. D., professor of Oto-Laryngology in the Chicago Eye, Ear, Nose and Throat College; formerly instructor in Otology, Rhinology and Laryngology in the University of Illinois, School of Medicine, and A. G. Wippert, M. D., attending Oculist and Aurist to Saint Elizabeth's Hospital, Chicago; formerly professor of Ophthalmology and Otology, Chicago Eye, Ear, Nose and Throat College. New 2nd Edition. 12 mo., 524 pages, with 180 engravings and 8 colored plates. Cloth, \$3.50 net. Lea & Febiger, Philadelphia and New York.

This is a concise and complete manual intended for the student and practitioner. The subject is well covered by both authors who are ably qualified, their individual experience being observed throughout its pages. For those desiring an up-to-date work not too large or extensive, it can be recommended.

**FOOD POISONING.** By Edwin Oakes Jordan, chairman of the Department of Hygiene and Bacteriology, the University of Chicago. The University of Chicago Press, Chicago, Ill. Price, \$1.00 net, postage extra, weight 14 oz.

This volume of 105 pages covers in a complete manner the subject of food poisoning. The subject matter is divided into nine chapters: the Introduc-

tion, Sensitization to Protein Foods, Poisonous Plants and Animals, Mineral or Organic Poisons Added to Food, Food-borne Pathogenic Bacteria, Animal Parasites, Poisonous Products Formed in Food by Bacteria and other Micro-organisms, and Poisoning of Obscure or Unknown Nature. The author is well qualified to present this subject, and has succeeded well in this small volume.

**EXPERIMENTAL PHARMACOLOGY.** By Dennis E. Jackson, Ph. D., M. D., associate professor of Pharmacology, Washington University Medical School, St. Louis. With 390 original illustrations, including 24 full page color plates. Price, \$4.00. C. V. Mosby Company, St. Louis, 1917.

This text book was gotten up with the primary intention of aiding the student to better study and experiment in the laboratory on the action of drugs. It covers its purpose fully, and should prove practical and useful to the student of pharmacology. The illustrations are plentiful and excellent, enabling the student to better grasp the experiments presented.

**ASTHMA.** Presenting an Exposition of the Non-passive Expiration Theory. By Orville Harry Brown, A. B., M. D., Ph. D., formerly assistant professor of Medicine, St. Louis University; with a foreword by George Dock, Sc. D., M. D., professor of Medicine, Washington University Medical School, St. Louis. 36 illustrations. C. V. Mosby Company, St. Louis. Price, \$4.00. 1917.

This is an excellent monograph, thoroughly complete and up-to-date. The theory of Dr. Brown apparently from his extensive studies and researches appears to be correct, and a perusal of this volume should greatly aid the physician in curing and abetting the suffering asthmatic. The book is so thorough and the references so extensive that one marvels at the tremendous amount of work done by Dr. Brown in endeavoring to elucidate the subject, including, of course, his "nonpassive expiration theory." A careful study of this work should well repay the physician in the knowledge gained and the better therapy of this distressing disease.

**OPERATIVE SURGERY OF THE NOSE, THROAT AND EAR** for Laryngologists, Rhinologists, Otologists, and Surgeons. By Hanau W. Loeb, A. M., M. D., Professor of Ear, Nose and Throat Diseases in St. Louis University, in collaboration with Joseph C. Beck, M. D., George W. Crile, M. D., William H. Haskin, M. D., Robert Levy, M. D., Harris P. Mosher, M. D., George L. Richards, M. D., George E. Shambaugh, M. D. and George B. Wood, M. D. In two volumes. Vol. II. Four hundred and seventy-six illustrations. Price, \$7.00. C. V. Mosby Co., St. Louis, 1917.

This volume of operations on nose, throat and ear is one of the best works on the subject in the English language that the reviewer has had the pleasure of



seeing. The subject matter is handled in a most common sense manner, and no attempt has been made to amplify or enlarge by padding. The contents are modern and up-to-date, and presented so that every step in the operations can be thoroughly understood and followed. The excellent illustrations of which there are many help out the reading matter wonderfully well. The list of collaborators, all of whom are thoroughly qualified, speak well for the positive success of this work. It should be a useful working tool in the hands of all interested in this specialty.

**CATARACT—Senile, Traumatic and Congenital.** By W. A. Fisher, M. D., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Published by Chicago Eye, Ear, Nose and Throat College. Price, \$1.50, postpaid. 1917.

The author presents his methods, especially his modification of the Smith-Indian operation, with the express purpose, as stated, of aiding the better and earlier treatment of cataract. The book should, in the hands of oculists, be useful to patient and doctor.

**THE PRACTICAL MEDICINE SERIES,** Comprising 10 volumes on the year's progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume II. **GENERAL SURGERY.** Edited by Albert J. Ochsner, M. D., F. R. M. S., L. L. D., F. A. C. S., Surgeon-in-Chief, Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery in the Medical Department of the State University of Illinois. Series, 1917. Price, \$2.00. Price series of 10 volumes, \$10.00. Year Book Publishers, Chicago.

This volume, covering 608 pages, has as editor Dr. Ochsner, who is well known to the medical profession of America, succeeding the late Dr. Murphy. He has filled his position exceedingly well, and we feel this volume will be well received. It covers the progress in surgery during the last year thoroughly.

**THE MEDICAL CLINICS OF CHICAGO.** Volume II, Number VI (May, 1917). Octavo of 252 pages, 46 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published Bi-Monthly. Price, per year: Paper, \$8.00; Cloth, \$12.00.

This number of clinics, closing volume two, will further strengthen the popularity of the Medical Clinics. The clinics in this number are all exceedingly interesting and instructive. They are as follows: Dr. Chas. A. Elliott, Jaundice, its clinical interpretation; Dr. Frank Smithies, Enterocolitis associated with presence of protozoa in stools; Dr. Portis, Carcinoma of esophagus; Dr. Williamson, Hemopneumothorax; Dr. Beifeld, Pernicious Anemia;

Dr. Corbus, Gonorrheal Arthritis; Dr. Straus, Cardiac Arrhythmia; Dr. Hamill, Tabes Dorsalis; Dr. Mix, Carcinoma of Hepatic flexure; Dr. Tice, Luetic infection of lungs; Dr. Hamburger, Hematemesis; Drs. Abt and Straus, Spontaneous pneumothorax due to emphysema; Dr. Wright, Acute nephritis following tonsillitis.

**MUSKETS AND MEDICINE or Army Life in the Sixties.** By Charles Beneulyn Johnson, M. D. F. A. Davis Company, Publishers. Philadelphia.

One of our members has brought out a book, not calculated to be a medical book, but a combination of history and medicine as he saw medicine practiced during the Civil war. Dr. Johnson was at that time a young man, not having then entered college, but attached to the Hospital department. His work there was the beginning of his career, and the beginning of his medical education.

In those days there were but few, if any, instruments of precision, no medical laboratories at their command, no clinical thermometers, no microscopes, and none of the other paraphernalia for clinical diagnosis. With the lack of all facilities for diagnosis which we use today, and at times very meager facilities for caring for the sick and wounded, the medical men of the time cared for the men fighting the war of the rebellion in no mean manner.

The doctor tells in a mighty interesting way the work of the medical men of that army. What is no less interesting than the medical history, is the history of the civil war as he saw and felt it, told after fifty years of retrospection.

After the war was over the doctor completed his medical education, and has since devoted his time to practice, but while doing that he apparently did not neglect the literary side of his studies, for he has written in a way which will interest any one of us, and which will be even more eagerly read by those of his comrades who still survive.

#### NEUROLOGISTS FOR THE ARMY

The National Committee for Mental Hygiene has created a sub-committee on furnishing hospital units for nervous and mental disorders to the United States Government, the project having been approved by Surgeon General W. C. Gorgas of the U. S. Army.

This sub-committee, of which Dr. Pearce Bailey, of New York, is chairman, is authorized to secure the services of alienists and neurologists to be commissioned in the Officers' Reserve Corps, Medical Section, and to serve in the neuro-psychiatric units which are to be attached to the base and other hospitals of the military services of the United States. Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to The National Committee for Mental Hygiene, 50 Union Square, New York City.

# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. XXXII

CHICAGO, ILL., AUGUST, 1917

No. 2

## Original Articles

### THE MORE COMMON SURGICAL EMERGENCIES IN THE UROGENITAL TRACT AND THEIR MANAGEMENT.\*

F. KREISSL, M. D.  
CHICAGO.

An attempt to discuss all or most of the emergencies arising in the male and female urogenital tract would result in a good-sized volume. Owing to the limited time, I take the liberty to present to your consideration several of those more frequently observed in general work and a few in which prompt recognition and speedy action is of paramount importance to save life.

*Injuries of the Vulva and Vagina.*—Injuries by a fall upon a hard object such as a bedpost, the back of a chair, a board, etc., usually appear as lacerations of the labia associated with considerable bruising and sometimes free hemorrhage or a hematoma, which is caused by rupture of the vessels of the plexus venosus (P. V. pressed against os pubis and ischii). During pregnancy or in the presence of varicosities of the plexus such hemorrhages may terminate fatally.

Cleansing of the wound, removal of all clots, ligation of spurting vessels and deep sutures are generally sufficient to control the hemorrhage. At other times, however, additional tight packing of the vagina and vulva, and compression with pads outside fastened by a T binder or a perineal spica will be required.

In all such cases it is advisable to look for possible injuries of the bladder, the vaginal fornix, the uterus and the rectum. By neglecting this precaution one might be disagreeably surprised to discover within a few days a vesico-vaginal fistula or a vaginal hernia or other unpleasant and serious complication after having been satis-

fied with putting a few stitches in an apparently superficial tear in the vulva.

Perforation of the hymen is usually accomplished with more pain than bleeding. The rupture of a very fleshy membrane, however, occasionally causes a very lively arterial hemorrhage and is sometimes complicated by deep fissures of the vagina which may even extend into Douglas' pouch. Ligation of the bleeding points and complete suture of the cleft are indicated.

*Abscess of Bartholin Gland.*—It should not be difficult to diagnose an abscess of a Bartholin gland nor should there be hesitation to open it. Delay would lead to fistula-formation and hypertrophic induration which then require extensive dissection and a long sick bed, the result being an ugly scar.

The early operation—a very simple one—is performed in the following manner:

Expose the inner surface of the labium and inject into the mucosa over the most prominent portion, 10 minims of a 2 per cent. novocain adrenalin solution, or place a pledget of cotton saturated with a 5 per cent. solution between the labia until anesthesia is complete.

With a thumb forceps grasp and make traction on the most prominent portion of the gland, on the inner surface, and with scissors curved on the flat, cut out an elliptic piece of tissue including all of the abscess-wall to the extent of one-third of the sac. Occasionally, where the gland has not been markedly distended, bleeding may necessitate one or two ligatures.

Immediately following the first cut of the scissors the contents gush out and the sac contracts, the swelling diminishes to one-third, leaving an irregular circular opening, the base of which is formed by the remnant of the sac wall. This presents an important point so frequently overlooked when making an incision for evacuation of abscesses, that with linear incisions the cut edges fall together in close apposition and readily unite, sealing the cavity; whereas in elliptical or circular excisions they cannot assume

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 16, 1917.



a position favorable to such coaptation, and, therefore, remain open and drain the cavity and healing must take place from the bottom.

The only dressing used is a pad of sterile absorbent gauze, upon which has been poured a small quantity of Van Arsedale's balsam—oil mixture (Bals. Peru, 5 parts, Ol. ricini 95 parts), placed between the labia, to be changed and replaced by the patient each time she urinates. No packing or sutures are required, and the patient can at once walk with freedom from suffering, and with little interference with the ordinary gait. The healing is complete within from seven to ten days.

*Acute Pyelitis in Pregnancy.*—If a pregnant woman be suddenly taken ill with a chill, a severe pain referred to the bladder or lumbar region or to both, nausea and vomiting, if the temperature rises, urination becomes painful and increases in frequency and the urine contains pus and blood cells, and if the blood examination shows an unusual amount of polymorphonuclear cells—85 per cent. to 95 per cent.—the diagnosis of a pyelitis should be clear. If in such a case the well-known conservative measures should fail, one should not be too anxious to induce premature labor. Since the trouble is generally caused by retention of an infected urine in the renal pelvis, the idea suggested itself to the author years ago to drain and disinfect the pelvis through the ureter cystoscope and this has since been successfully carried out by him in every such case. All of them received immediate relief and went to term. In most of them only one application of silver nitrate was required, in others two or three, and only in a very few upon return of the symptoms the treatment had to be repeated, but in none of them spontaneous premature labor occurred, nor was it necessary to induce the same. It should, however, be admitted that occasionally radical surgery may be urgently required when the infection has involved the kidney parenchyma proper and the acute symptoms should not subside in spite of these conservative measures.

*Paraphymosis.*—Undue haste and forcible manipulations rarely accomplish the prompt and never the painless reduction of a more recent paraphymosis. Forcibly pulling the prepuce over the glans causes great pain and lacerations of the integument. In reality the gland should be pushed through the constricting ring of the prepuce.

This is best accomplished in the following manner:

Place the penis in a medium-sized washbasin filled with hot water, steady the prepuce with three fingers and thumb of one hand behind the constriction, and exert continuous concentric pressure on the glans with three fingers and thumb of the other hand, particularly on the part near the constriction. In this way the size of the glans decreases within a few minutes, and will then, upon moderate pressure, readily pass through the ring.

In the few cases in which these attempts at reposition should not be successful, it is advisable to incise, under local anesthesia, the constricting ring on the dorsum of the penis and follow this up by a circumcision unless an infectious process of the glans or prepuce should contraindicate the latter.

*Torsion of the spermatic cord.*—Torsion or twisting of the spermatic cord, one of the rarer conditions demanding early recognition and prompt action, occurs both in normally located and in undescended testicles. It runs its course under symptoms resembling those of a strangulated inguinal hernia in the former and those of acute intra-abdominal intestinal lesions in the ectopic type. If not immediately attended to gangrene is likely to develop, which not only destroys the testicle, but endangers the life of the patient, particularly in the second group—the ectopic variety.

After exposing the lesion by an incision through the scrotum up to the external inguinal ring, or higher up in the ectopic type, the cord should be untwisted and the return of healthy color to the more or less dark blue or black organ watched for in the same way as with a released strangulated gut. If this be the case, the wound may be closed, but if there is any doubt as to the integrity of the testicle, the wound should be left open and a drain placed therein. If gangrene has already set in, which is readily recognized by the peculiar color and the brownish spots dotting the lusterless surface of the testicle, immediate castration above the twisted portion of the cord is urgently required.

*Injuries of the testicle.*—Penetrating injuries of the tunica albuginea of the testicle are followed by a prolapse of the seminiferous tubules, the entire mass of which being liable to leave the containing shell even through a minute slit and



subsequently be destroyed by necrosis. This mass may be easily recognized by its reddish-brown color and if seen at an early stage, it should be cleansed with sterile salt solution, replaced in its normal bed with a grooved director or a blunt probe and the slit closed with a few fine Lembert sutures. If the prolapsed part should, by its dark color, show evidence of beginning sloughing, it should be resected, the bleeding points seared with the thermocautery and the slit closed in the above manner.

In multiple tears one should, without consideration for the seminiferous tubules, unite as much of the wound-edges as can be brought together by suturing, leaving a wick drain in the vaginal sack. Castration might have to be considered only when extensive destruction of the testicle should render the possibility of its conservation doubtful.

*Traumatic lesion of the urethra.*—Laceration and rupture of the anterior urethra are always associated with more or less visible oozing of blood. This is not observed in injuries of the deep urethra. Owing to the action of the external sphincter, the blood, after filling the same to its capacity, flows over the nonstriated and, therefore, weaker vesical sphincter into the bladder. Only if the injured should be able to urinate, blood mixed with urine will appear at that time.

But, as a rule, these instances are rare, and inability to void is one of the chief symptoms of an injury to the posterior urethra. The hemorrhage, however, unless a larger vessel be severed, is a negligible factor. Of grave importance on the other hand is the extravasation of urine in the surrounding structures, its decomposition, the subsequent abscess formation, and if not promptly relieved, death in urosepsis. Intractable strictures are also an inevitable result of inadequate or delayed action. With the exception of traumatic lesions which are attended surgically before the injured has had occasion to void, extravasation of urine occurs in every laceration of the urethral mucosa, the amount of which varies with the character and size of the wound.

If only a fraction of the circumference of the anterior urethra be involved, a good sized soft rubber catheter should be passed into the bladder and securely fastened to the penis, left there for five days, by which time the wound will be sealed

by granulations which, if not disturbed by premature instrumentation, will prevent further leakage and infection at the time when spontaneous urination is to be resumed. If, however, a soft rubber catheter be arrested at the lacerated part of the canal, one should not attempt to force a passage with a rubber catheter of smaller size or a metal instrument, which would only undermine the urethra and cause more destruction. In such an event access to the wound should be gained by a free longitudinal incision from without, the edges of the torn urethra drawn together by fine catgut sutures and the incision closed.

When dealing with a complete or almost complete transverse laceration of the anterior urethra which oftentimes requires considerable dissection to bring the severed ends of the stumps together, the better plan would be to deflect the urine by means of a drainage tube which introduced into the bladder through a buttonhole incision in the membranous portion may be removed on the fifth day. It is remarkable how quickly and with what little, if any, reaction the continuity of the canal can be restored in this way.

In wounds of the bulbous part near the external sphincter and those of the deep urethra, we will oftentimes be compelled to open the bladder suprapubically, pass a retrograde grooved director from above and open the urethra by an incision in the perineum. The nature of the trauma in these cases usually produces extensive or complete lacerations of the canal and crushing of the surrounding tissues, which without this guide render the recognition of the wound edges very difficult, if not impossible; and consume hours of searching and digging in the viable bruised structures; certainly not an ideal surgical way. After bringing the urethral stumps in apposition by catgut sutures, an indwelling rubber catheter should be introduced all along the canal and left there for five days.

Permanent siphon drainage, however, should be kept up while the catheter is in position, because the bladder urine—most likely by capillary action—always finds a way to seep downward between catheter and urethra, infecting the wound and thereby interfering with prompt healing.

The suprapubic wound may be closed immediately, but the perineal wound should be left open and packed.

If extravasation of urine in the perineum,

serotum, and other adjacent tissues has already occurred, these parts should be freely incised in order to prevent as far as it can be done extensive sloughing and sepsis by absorption. No attempt should then be made to unite the lacerated urethra, but suprapubic vesical drainage should be employed in order to deflect the urine from the lacerated tissues for at least 4 to 5 days, after which the suprapubic drain may be removed and an indwelling rubber catheter placed along the urethra. This catheter should be withdrawn within 2 to 3 days and then dilatation of the urethra commenced.

*Prostate Abscess.*—To wait for the spontaneous rupture into the urethra of a prostate abscess is a serious mistake. At best it causes prolonged suffering and leads to unnecessary destruction of the parenchyma and to chronic prostatitis with its subsequent train of sexual neurasthenia and sexual debility. Furthermore, the pus might burrow its way towards the rectum followed by fistula formation or it will break into the peritoneal cavity causing fatal peritonitis. Phlebotrombosis and sepsis is another possibility.

As soon as established and recognized, the abscess should be opened and drained, using the same incision as for perineal prostatectomy, care being taken not to injure the rectum. As the posterior wall of the gland is reached a pointed bistoury is plunged into the fluctuating part, the small opening thus made enlarged with forceps, a drain inserted into the cavity and the wound closed around the tube.

Using a trocar canula for the opening of the abscess through the rectum or the posterior urethra or through the perineum is an antiquated method, unsurgical and unsafe, and at best will unduly prolong the process.

A prostate abscess should be opened between the third and fifth day after the onset of the acute initial symptoms even if fluctuation be not distinctly palpable through the rectum. I have reference to those cases in which a number of miliary abscesses have not yet broken through the separating septa of interstitial tissue. The blocking of free urination, the persistence of a high temperature and a palpable painful swelling of the gland are sufficient evidence of its presence, if one should not avail himself of the corroborative leucocyte count.

*Injuries of the bladder.*—Penetrating injuries and rupture of the bladder cause identical symp-

toms, the severity of which however depends on the extent and the location of the lesion.

If the wound should involve the peritoneum, constitutional symptoms will predominate. The patients, immediately after the injury has occurred, present the picture of shock—the pinched face, the anxious expression, a thread-like, rapid pulse, cold sweat and subnormal temperature.

If, as it oftentimes happens, other abdominal viscera be injured, the symptoms produced by the latter may fuse into the former, even overshadowing the same. Bladder wounds which do not involve the peritoneal cavity and are not very extensive usually exhibit much milder symptoms in the early stage. A slight pain and constant tenesmus are complained of, but only a small amount of blood-stained urine is voided. These injuries result from traumatism, such as a fall, a blow, a gunshot or stabbing, but they are also observed as complications of established bladder lesions such as vesical diverticulum, stone, solitary and other ulcers and tumors.

I have seen them caused by forcible instrumentation and by undue and hasty distension of the bladder wall with fluids injected for the purpose of a cystoscopic examination or for intravesical treatments. The accident is most likely to happen in the presence of an ulceration of the bladder wall or a diverticulum. Hence the necessity of consulting the tolerance of the bladder at the time of injecting a certain quantity of fluid and of immediately desisting as soon as the slightest resistance be noticed. But this is only possible if we abolish the obsolete irrigator can and use a piston syringe.

In some of these cases with a very small or puncture-like opening its edges soon close superficially and the injured resumes the voiding of apparently normal quantities of urine. It would then be a serious mistake not to investigate and leave the case to itself because the extravasated urine is bound to decompose and spread either in the pelvic cellular tissue causing extensive supuration or involving the peritoneum with the subsequent and inevitable sepsis.

The possibility of a bladder injury should always be considered when a trauma has been inflicted upon the lower abdomen or perineum, especially in the presence of the symptoms mentioned before. By a catheter introduced into the bladder we may determine the presence or absence of bloody urine and by injecting a measured



amount of sterile water and watching the amount of return flow we may ascertain whether or not the continuity of the bladder-wall be intact. It is hardly necessary to mention the possibility of bone fragments lodging in the bladder cavity after crushing injuries involving the pelvis or to urge the necessity of their prompt removal.

The treatment of a laceration, puncture, or rupture is practically the same. Free exposure of the rent; suture and drainage.

*Urine Retention.*—When confronted with a case of sudden and complete retention of urine, the physician should first look for its cause and then decide on the means for immediate relief, which in some will be accomplished by conservative steps, while others will require radical surgical action. It should be remembered that in one group the retention is brought about by an obstruction, in another by reflex spasm and in a third by muscular paresis.

Sudden complete retention may set in when a small renal or vesical calculus being expelled from the bladder becomes lodged along the urethra, mostly in the prostatic part or at the external meatus. Here the anamnesis will reveal a preceding renal colic or vesical irritation. Sudden retention also occurs as a complication of acute vesiculitis, prostatitis and prostate abscess. The history of urethral infection or trauma, together with rectal palpation, will plainly point to the cause.

On the other hand sudden and complete retention appearing in men afflicted with strictures of small caliber or with so-called prostate hypertrophy is always preceded by symptoms of straining and frequent urination in shorter intervals than normal, extending over a longer period.

To guess at the relation of a sudden retention of urine to a preceding case of labor or to a recently performed operation on the rectum or the female genitals or to a succession of hypodermic injections with morphine should not be a very difficult task.

Cerebral or cord lesions (either of a spastic or paralytic character) may not always be readily recognized as the cause of sudden retention at first glance, but should be thought of and searched for with our well-known diagnostic aids, when other lesions have to be excluded from the etiology.

Sudden urine retention during acute infectious

diseases is a condition so frequent, so well known and so manifest that I may be permitted to pass over it without further comment. In almost all cases of sudden retention there are two symptoms present, painful, fruitless tenesmus, and an over-distended bladder demonstrable by dull percussion-sound above the symphysis. Tenesmus, however, may be absent in cord and cerebral lesions and in acute diseases with a clouded sensorium. It is necessary to emphasize this vesical distension as in contradistinction to tenesmus coupled with an empty or nearly empty bladder as observed in urine blocking caused by obstructing renal and urethral calculi. Anuria without tenesmus complicating bilateral renal insufficiency should hardly be mistaken for vesical retention.

Some cases of vesical retention can be at least temporarily relieved by catheterization with suitable instruments, some even without much instrumentation. At times irrigation of the external genitals with warm water or a hot sitz-bath will suffice to overcome a spasmodic contraction of the vesical sphincter, in others the instillation of a few drops of a 1 per cent cocain solution in the vesical neck is helpful to relax the muscle. The injection into the bladder of a warm mixture of 1 ounce of sterile water and 2 drams of glycerin is also useful for the same purpose.

In detrusor paresis and obstructions such as strictures, prostate abscess or so-called hypertrophy, evacuation of the bladder by catheter becomes necessary.

These catheters vary in size, shape and texture according to the nature of the trouble. In prostatic obstructions flexible so-called Mercier's with an angular curve of large caliber ranging from 22 to 28 French scale are to be used. In prostatitis, prostate abscess and also in detrusor paresis only medium sized elastic so-called Nelaton catheters are permissible, and in stricture-retention small sized flexible or metal catheters attached to filiform guide-bougies should be employed.

One may readily understand that a flexible bougie of large size is apt to follow the twisted shape of the prostatic urethra, gliding over the obstructing nodes, while a small calibered gum catheter will be caught in these winding, angular curves, and when finding resistance at the adenomatous protrusions, will be coiled up in the deep



urethra. If much difficulty was experienced in passing it through a stricture or over a bad prostatic obstruction and false passages in the canal, it is better practice to secure the catheter in its position in the bladder at least for a day than be compelled to repeat the procedure within a few hours.

It should hardly be necessary to urge the most rigid asepsis and antisepsis in all these procedures and the utmost delicacy in manipulating catheters in the urethra and through the obstructing tissues. Roughness and force will bring about lacerations and false passages with the inevitable train of bleeding, infection and urethral shock. Frequently voluntary urination will be resumed through proper catheterization; in other cases, obviously requiring operative procedures, ample time is thereby afforded for the necessary preparatory steps. Where skillful attempts to enter the bladder fail, drastic surgical relief is demanded.

In so-called impassable strictures and prostatic obstructions, supra-pubic aspiration or puncture, both very simple and harmless procedures, are indicated. Depending on the local and general conditions in the individual case and on the further steps in contemplation after the urgency of the case has been taken care of, one will either be satisfied with a single aspiration of the retained urine or resort to supra-pubic puncture and subsequent drainage.

*Lege artis* performed, the steps for the operation are as follows:

Shave and cleanse the supra-pubic region, infiltrate with a 1 per cent novocain adrenalin solution successively all tissues down to the pre-vesical fat, make a vertical skin incision from the symphysis upwards one-fourth inch long, and, keeping close to the edge of the bone, plunge a trocar canula in a downward and slightly forward direction through all the tissues into the bladder. Withdraw trocar needle, introduce through the canula a well-oiled small-sized elastic catheter until it reaches the bottom of the bladder and remove the canula over the catheter. It is advisable to stiffen its lumen with a long and slender metal probe, which helps to steady the catheter and prevents its being pulled out of the bladder while the canula is being withdrawn.

Where there is no reason to give more than immediate relief, aspiration will suffice. After

shaving and cleansing the supra-pubic region in the customary way, the aspirating needle keeping close to the edge of the symphysis, is plunged in a downward and forward direction into the bladder and its contents removed by aspiration, whereupon the needle is withdrawn.

No leakage through the puncture opening in the bladder wall need be anticipated, the same being safely sealed by the time the bladder becomes distended again.

When introducing the trocar or the aspirating needle in the previously mentioned downward and forward direction, one need not be afraid of injuring the peritoneum in either procedure, since—rare abnormal pathological conditions excepted—the peritoneal reflexion in a bladder containing more than 300 cc. of urine is invariably to be found about two to four inches above the vesical sphincter.

*Injuries of the Kidney*—Injuries of the kidney, whether caused by gunshot, stabs or other penetrating bodies, or as a result of crushing, a blow or a fall, deserve our most serious consideration and should receive the promptest attention. The grave importance of these injuries lies in the danger of hemorrhage, of infection and of the possible destruction of the parenchyma.

As a rule, we are inclined toward speedy action in penetrating, visible wounds, but when the injury be an internal one, when hemorrhage chiefly occurs into the perinephritic tissues and comparatively little or no blood appears in the urine, we are likely to jeopardize the injured person's life by procrastination.

It is true, operative procedures are not necessary in every such case, and hemorrhage subsides by suitable palliative measures in minor ruptures and lacerations, but it would be an unpardonable mistake to draw from this experience conclusions in all renal injuries. On the contrary, one should keep a close watch over these patients, observe the pulse, the respiration and their general appearance and frequently also palpate the upper abdominal quadrant.

If the symptoms of a rapidly progressing anemia are becoming marked, consisting in a rapid, threadlike pulse, paleness of the skin and visible mucosa, persistent yawning and much thirst, and if a palpable round tumor appears in the lumbar and epigastric region, one should not lose any

time with styptics and icebags, but open up the loin and expose the kidney.

The further steps to be taken depend on the severity and extent of the lesion.

In some cases, ligating of bleeding vessels and suture of the cleft or clefts, with or without packing, might suffice. Even in extensive and multiple wounds, especially of the upper third of the kidney—if larger vessels near the hilum are not severed—packing and deep-laid mattress sutures will effectively arrest the hemorrhage.

On the other hand, when the major part and especially the lower two-thirds of the kidney have been badly lacerated and larger vessels close to the hilum are severed, nephrectomy will be the only means to save the patient's life.

*Acute Unilateral Septic Nephritis*—A severe chill, a temperature of 104 degrees or over, a leucocytosis of as high as 40,000, the pulse running to as much as 150 a minute, the patient exhibiting the well-known signs of an acute septic condition (*e. g.*, face flushed, clouding of the intellect, delirium) and the history of a preceding tonsillitis, middle ear or mastoid infection, a carbuncle or furuncle, an attack of grippe, an intestinal infection, or a curettage of the uterus, should point to an acute unilateral septic nephritis as the cause.

Palpation may elicit some tenderness in the costo-vertebral angle and rigidity of the abdominal muscles on the affected side.

Bilateral catheterization of the urine and a functional test will demonstrate a deficiency in quantity and also a greatly reduced elimination of solids on this side.

In order to differentiate this type of septic nephritis from an acute post scarlatinal nephritis a blood culture should be made, if time and conditions permit. In the septic type the respective micro-organism will be demonstrated, while in the latter the culture will remain sterile. Since these cases—overwhelmed by a profound toxemia—if not relieved surgically, oftentimes terminate fatally within a few days, early exposure and inspection of the kidney is most important. On the condition to be found the further steps will depend. In the diffuse inflammatory type, which is caused by the nonpyogenic colon bacillus, renal decapsulation is indicated, with or without in-

cision of the parenchyma, as might be deemed necessary.

This type is readily recognized by the irregular areas of congestion—red patches—in the cortex and eventually, also, in the pyramids. A quick smear of a scraping taken after incising a patch will demonstrate the presence of the colon bacillus.

In the suppurative type, miliary abscesses are covering more or less of the surface of the cortex, from which material may be secured in mid-operation exhibiting staphylococcus pyogenes or streptococcus. In early nephrectomy we have the only chance to save the patient's life.

5 North Wabash Avenue.

#### DISCUSSION ON THE SYMPOSIUM

Dr. S. C. Stremmel, of Macomb, thought no class of cases is receiving poorer treatment at the hands of the general practitioner today than urethral stricture. He finds that in simple annular strictures the internal urethrotomy wound will cover over with calummar epithelium if you occasionally pass a sound after operation.

In one case where a clay bank fell in and smashed an urethra clear down to the prostate, a distance of about four or five inches, seen first when the patient couldn't urinate at all, a suprapubic cystotomy was performed and later an external/perineal urethrotomy, producing an urethral fistula.

This was twenty-eight years ago. For three years now the patient hasn't passed a sound nor a catheter or anything. He has a permanent urethral fistula, his sexual life is all right.

Dr. Mowry, of Chicago, related the case of a masturbator who had never had normal sexual intercourse, but used a bottle, which was wrenched loose, causing a severe traumatic urethritis. Although this man had never had a specific urethritis, the pus that came from his urethra was apparently full of gonococci (on the slide). The culture proved there was none, which showed the fallacy of making gonococci slides.

Another patient, after various experiments, introduced three pieces of chewing gum into his bladder. He said two had come back and one remained. With a cystoscope a black mass could be seen. Three months later a phosphatic calculus with the gum embedded was removed by suprapubic cystotomy. A remarkable thing, which the chewing gum people would pay a big price for as an advertisement, was that when the mass was sliced open the spearmint odor was apparent almost all over the operating room.



## SPECIFICITY AND NON-SPECIFICITY OF VACCINES.\*

DAVID J. DAVIS, M. D.,

From the Departments of Pathology and Experimental Medicine,  
University of Illinois.

CHICAGO.

Upon the introduction into the body of a great variety of protein substances—blood serum, egg white, bacterial proteins or vaccines, milk and many proteins of vegetable origin—there appear certain complex reactions which may be divided into two categories, the one specific, the other non-specific.

The specific reactions are those which can be produced only by the particular protein in question and result in the formation of the various antibodies and in a change in the cells of the body of such a character that they may be easily stimulated at some future time to form those same antibodies. These specific reactions arise in response to certain properties of the protein known as antigenic properties.

The non-specific reactions result from certain properties or constituents of the protein molecules which are common to many proteins. Ordinarily, they are not manifested when the protein is injected, unless the organism has been previously treated with it and contains sufficient ferment to split the protein into its constituent parts. These constituents are, according to Vaughan, roughly, a toxic and a non-toxic portion, the toxic being non-specific, whereas, the non-toxic is specific. The reactions of the toxic bodies include such processes as leucocytosis, chills and temperature changes, variations in blood pressure and secretions, increased coagulation time and the like. Vaughan says the chief symptoms of infectious diseases are caused by these substances, produced through the disintegration of bacteria by the special ferments elaborated by the body.

Therefore, when many bacterial proteins are incorporated into the body, this double train of events results. Thus, during an attack of typhoid fever, smallpox, scarlet fever, etc., the body becomes at first highly intoxicated and, also, soon highly immune to the particular disease, but not to others. In addition to the toxemia, the specificity factor is here clear and definite.

In other diseases the specific and immunity reactions are manifested very slightly or practically not at all. The toxic reactions, however, may or may not be very marked. Why specific and immunity reactions vary so strikingly in different infections, is one of the most fascinating as well as baffling problems in the study of disease.

Based on the fact that in certain diseases immunity follows an attack, and also upon the experimental work of such men as Jenner, Pasteur and scores of others, many diseases in both animals and man have been treated with the specific germs, living, modified or dead, for both preventive and curative purposes. The prevention of disease by specific vaccines has been generally successful in those diseases in which immunity follows an attack. In man, in typhoid and paratyphoid fevers the results are perhaps the most convincing; they are less striking, though decidedly encouraging, in plague and in cholera. In animals, marked success has been attained with vaccines in swine erysipelas, symptomatic anthrax, and rinderpest. The great majority of infections are not, however, appreciably influenced by specific preventive inoculation. This point is important, because it is in the normal body inoculated for prophylactic purposes that we might expect most favorable conditions for the specific action of vaccines.

Although the literature contains numerous reports on the curative value of vaccines—even more than on their preventive value—on the whole the data is not strikingly convincing as to the success of this treatment. There exist, for example, no body of convincing data in connection with the curative effects of vaccines that compares with that on the prophylactic value of typhoid vaccine.

The doctrine of specificity in disease has played a most important rôle in determining our viewpoints as well as our interpretations of facts in pathology. The great contributions of the bacteriological era, including the germ theory of disease, the discovery of antitoxins, the field of immunity as elaborated by Metchnikoff and Ehrlich and the work of A. E. Wright have all tended to support the dominance of this idea. It was perfectly natural, therefore, when bacteria, living or dead, were introduced into the body, that the resulting phenomenon should be interpreted in

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.



terms of the principle of specificity. Indeed, so dominant became this idea that, in connection with the great amount of experimental and clinical work done on vaccines and opsonins by Wright and his followers, ruthless disregard of suitable control observations was characteristic of this period. Vaccines,—that is, foreign bacterial protein,—were introduced into the body infected with that bacterium and the results were interpreted as being specific for that particular product and no other.

While a few scattered observations on the effect of non-specific vaccines appeared in the literature even before the work of Wright, it was not until the last few years that properly controlled observations on the comparative effect of various protein products, including different vaccines, began to be made. This data soon tended to show that non-specific factors seemed to play a highly important rôle in the treatment by vaccines. I think it may be said at the present time that most of the prominent workers in this field now regard the non-specific effects of vaccines as of greater importance, at least in the immediate favorable results obtained, than the specific or immunizing effects of the vaccine.

It is difficult to evaluate the results of vaccine administration in the treatment of infections. Many favorable and many indifferent results have been obtained by various prominent workers. The good results have been reported chiefly in connection with gonorrheal infections, typhoid fever, whooping cough, localized staphylococcus infections and certain colon infections.

Up to some three or four years ago the favorable or unfavorable results were interpreted in terms of specificity. About that time Kraus, Ichikawa, Gay and Chickering and others excited much interest in typhoid by reporting strikingly favorable results following intravenous injections of typhoid vaccine. But soon Kraus, Luedke and J. L. Miller reported equally good results by using other substances, such as colon vaccine, albumose, and other foreign protein products. Sterile milk was used by Mueller and Weiss with good results in gonorrheal arthritis, and later Miller and Lusk used typhoid vaccines and proteose intravenously with good results in chronic arthritis.

Culver, working in our laboratory at the Uni-

versity of Illinois, has made a most careful comparative study of the effects of the various bacterial proteins and proteoses, both primary and secondary. This study was confined largely to gonorrheal infections and the bacterial proteins consisted of vaccines of gonococci, meningococci and *B. coli*, all introduced intravenously. Following the intravenous injections of these vaccines and proteoses a very severe reaction set in, manifested by a severe chill and an immediate slight drop in temperature and leucocyte count, soon followed by a marked rise in both (temperature to about 104 degrees, leucocytes to 25,000-30,000 or more) and profuse sweating. Culver's conclusions are that this treatment in gonorrheal arthritis and epididymitis and in some cases of prostatitis seems to possess decided therapeutic value, and the results appear to be usually permanent in character. He states that gonococcal vaccines do not act specifically, either as a diagnostic or a therapeutic agent, since a similar reaction was obtained by suitable injection of meningococcus and colon bacillus vaccines. Leucocytic and temperature curves carefully obtained following the intravenous injection of these various substances were quite identical. The reactions in non-gonorrheal patients in every way resembled those with gonorrhea. Sixty-two patients with gonorrheal infections were treated; 21 of these were given gonococci with 2 failures; 15 were given meningococci with one failure; 6 were given colon vaccine with one failure. Twelve patients with acute gonococcal epididymitis were treated and all were well within a week. Gonococci, meningococci and colon act alike in this respect.

He has obtained equally good results using intravenous injections of primary and secondary proteoses in these infections. Of five patients given primary proteose, all responded with rapid improvement, and of fifteen given secondary proteose, all except one rapidly improved and were soon well. In several of these cases he studied the antibodies in the serum following the injection and found that there is first a slight fall, followed by a distinct rise in the opsonins and lysins for gonococci. However, the period of improvement and well-being does not parallel to any appreciable degree the rise in antibody content. This is not remarkable, since we have long known that the course of an infection does

not necessarily parallel the demonstrable antibody content of the patient's blood or body fluids.

Culver warns against treating patients with organic heart disease in this manner, but mentions no other contraindication. Clinically, the benefit to the patient runs parallel with the fever and leucocytosis produced, and he suggests that these play a rôle in the treatment.

Culver has also treated a number of cases of localized staphylococcus infections with foreign non-specific protein (autolyzed colon vaccine) and noted that they responded promptly with results comparable to those of Wright's with autogenous vaccines in these infections.

Mathers and Rosenow and Falls have reported results obtained by treating lobar pneumonia with intravenous and subcutaneous injections of vaccines of autolyzed pneumococci. Similar striking reactions were observed followed at times by clinical improvement. Mathers states that the specific pneumococcus vaccine is in no way superior to typhoid, staphylococcus or streptococcus vaccines or to foreign serum.

As to the explanation of these results obtained alike by specific and non-specific therapy, we may briefly mention a number of factors which, no doubt, operate to the patient's benefit.

It is possible that the fever may play a rôle in the destruction of bacteria, especially in infections with the gonococcus, which is highly sensitive to heat. The high leucocytosis is another factor which might exert a very decided influence in overcoming the infection through phagocytosis. Gay and his associates have especially emphasized the effect of temperature and leucocytes in the favorable results obtained by them in typhoid.

It is known from experimental and also from clinical studies that specific antibodies (agglutinins, lysins, etc.) may be stimulated by the introduction into the system of non-specific substances. The specific typhoid bodies in rabbits may be very decidedly increased by injecting into the animal a foreign protein.

Jobling and Peterson, in their analysis of the mechanism of non-specific therapy, emphasize particularly the mobilization of serum protease and lipase and the rise in the antiferment titre of the serum following the injection of various foreign proteins. Their work on typhoid, pneumonia and other infections indicates the rapid

appearance in the blood of ferments after the injection of proteoses and other substances. They note the same phenomenon after the administration of iodine in tuberculosis and syphilis. Here the iodine, according to their view, saturates the fatty acids which act as antiferments and thus liberates ferments which destroy the granulation tissue and make the organism vulnerable to the body fluids or to drugs, like mercury in syphilis.

F. H. Falls, in his work upon the Abderhalden reaction, has pointed out the interesting fact that not only in pregnancy, but in various infectious diseases—typhoid, lobar pneumonia, acute articular rheumatism, malaria, meningitis, tuberculosis and syphilis—the ferment content of the serum, as measured by this method, is distinctly increased. Hence, there frequently appears a positive Abderhalden in these conditions indistinguishable from that in pregnancy and destroys the practical value of the test in the latter condition. The foreign protein in the serum is probably responsible for the ferment increase, and this may explain, also, the increase in the antitryptic power of the blood observed by various workers under such conditions.

One difficulty in vaccine therapy has been to explain the good results, especially in the treatment of acute infections with vaccines. Wright himself early noted this. On the basis of Wright's theory, this mode of treatment was not rational or was contraindicated. In the light of these recent observations we may now believe that such results were due to action of non-specific protein constituents of the vaccine.

An important point is the proper standardization of these protein substances for injection. A substance should be obtained, if possible, uniform in composition and action, so as to minimize the dangers when given by those inexperienced in its use. All who have used these substances intravenously, or even otherwise, point to definite dangers, especially those of cardiac origin. Caution should, therefore, be exercised by all who undertake their administration.

To summarize, recent work tends to show that many substances, including vaccines and foreign proteins and their products, when injected, especially intravenously, will cause a severe reaction, manifested by chill followed by fever, hyperleucocytosis, pain in the affected parts, and sweating. In certain diseases this may then be



followed by a feeling of well-being and often by permanent improvement and cure. In the blood, in addition to leucocytosis, occurs a disturbance of the ferment-antiferment balance and also changes in antibody content, which may be specific for the infecting organism, though produced by a non-specific stimulus.

Comparative studies of the reactions produced by various proteins indicate a striking similarity in their effects on the body, whatever their source. In certain diseases the results are encouraging, though the study is still in its infancy and much more work is necessary to determine the true value as well as to appreciate possible dangers and disadvantages of this form of therapy. For preventive inoculation, specific vaccines find their rational use. In certain conditions, where it may be desirable to inoculate for both curative and preventive purposes, specific vaccine treatment would seem to be an indicated and logical procedure.

#### REFERENCES.

- Culver, H. B.: J. A. M. A., 1917, LXVIII, 362-366.  
 Falls, F. H., J. Inf. Dis., 1915, XVI, 466.  
 Falls & Rosenow: J. A. M. A., 1916, LXVII, 1929.  
 Jobling & Peterson: J. A. M. A., 1916, LXVI, 1753.  
 Luedke: Muench. Med. Woch., 1915, LXVII, 321.  
 Miller, J. L.: Ill. Med. Jour., 1916, XXIX, 8.  
 Mueller & Weiss: Wien Klin. Woch., 1916, XXIX, 249.  
 Miller & Lusk: J. A. M. A., 1916, LXVI, 1756.

### VACCINES FOR PROPHYLAXIS.\*

GUSTAV F. RUEDIGER, M. D.,

LA SALLE, ILLINOIS.

Immunity or resistance to infection may be either natural or acquired. Acquired immunity may be either active or passive. The latter is that conferred upon an individual by the injection of a prophylactic dose of antitoxic serum, as diphtheria or tetanus antitoxin. Active acquired immunity, which is the only form with which we are concerned in this paper, may be produced by an accidental infection resulting in an attack of the disease with recovery, or by a deliberate inoculation of the body with a living attenuated virus or a killed virus. This deliberate inoculation for the purpose of increasing the resistance of the individual toward infection is generally spoken of as vaccination, and the material used in the process is known as a vaccine. As examples of vaccination with living attenuated virus, may be mentioned vaccination against smallpox

and rabies in man and vaccination against anthrax, pleuro-pneumonia and rinderpest in animals. As examples of protective inoculation by means of killed virus, should be mentioned vaccination against typhoid, paratyphoid, cholera, whooping cough and plague.

The protection conferred by smallpox vaccination is too well known to require extensive discussion. The virus, as is well known, is obtained from a vesicle on a calf or heifer that has been experimentally inoculated, under aseptic precautions, with a proper bovine virus, or a virus derived more or less remotely from human smallpox. The protection conferred upon the vaccinated individual is not absolute, but very high during the first two years following a proper reaction. After the first two years it gradually begins to weaken and is generally considered to have vanished in the course of ten years. Revaccination every five years or whenever smallpox is prevalent in the community is, therefore, advisable.

It is difficult to get statistics showing the value of smallpox vaccination, but it is significant that in Germany, where vaccination is compulsory during the first two years of life and re-vaccination is enforced at the time of entering school and again at the time of entering military training, there have been only 626 deaths from smallpox during a period of thirteen years, in a population of fifty-six million people. In 1899 the total deaths in 285 German cities, with a population of nearly 16,000,000, amounted to only four. During the same year there were about 600 deaths in 116 French communities, with a population of 8,500,000, where vaccination is not universal.

Vaccination against rabies is resorted to only in cases where a person has been bitten by an animal that is known to have rabies or is strongly suspected of having the disease. The Pasteur treatment is not a therapeutic inoculation, but is distinctively a prophylactic vaccination with a living attenuated virus. The virus is obtained from the spinal cord of a rabbit that has been etherized just before death takes place following an experimental inoculation with a strain of virulent virus. The attenuation of the virus is usually obtained by drying the cord for a definite number of days over caustic potash. As a rule, the treatment is begun by the subcutaneous injection of an emulsion prepared by grinding up

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.



in physiological salt solution a small piece of the cord that has been dried for fourteen days. During the subsequent injections the strength of the virus is gradually increased by using a piece of the cord that has been dried for a shorter and shorter period of time, until eventually, usually at the end of the first week, an injection is given with a virus that has been dried for only two days. Harris<sup>1</sup> has recently perfected a method of antirabies treatment which he claims is superior to the Pasteur method in that the time required for complete immunization is only ten days, as against 21 days in the Pasteur method. The attenuated virus is prepared by freezing the fresh cord, after it has been ground up, and then rapidly drying it in a desiccator in a vacuum. The perfectly dry virus may be kept in the cold for three months or longer without deterioration.

It is difficult to obtain accurate statistics in regard to the mortality of bites from mad dogs, but it is generally believed to average from 10 to 16 per cent. It is much higher, however, in cases of bites on the face or hands. Statistics giving the results of the treatment also are more or less unsatisfactory, because many facts are unobtainable. It seems, however, that the average mortality among those where treatment is instituted promptly is below 0.5 per cent and is gradually being lowered from year to year.

Prophylactic vaccination of cattle and sheep against anthrax was discovered by Pasteur in 1882 and is used quite extensively in certain parts of Europe and South America. The method consists of two inoculations made at intervals of about twelve days. The first inoculation is made with an attenuated living culture, which has been grown for ten days or more at 42 degrees Centigrade and has been reduced in virulence until it no longer kills a guinea pig, but is still fatal to white mice. The second virus is more virulent than the first and is strong enough to kill a guinea pig, but not a rabbit. In France from thirty to fifty thousand cattle and horses and from 250,000 to 350,000 sheep are vaccinated annually, and it is estimated that many thousands of animals are saved by this precaution.

The protective value of antityphoid vaccination has been proven beyond a doubt, despite the fact that very discouraging results have been reported from certain quarters. The first attempt

to vaccinate men on a large scale with heated typhoid cultures was made by Sir A. E. Wright in 1896.

In 1898 Wright vaccinated about 4,000 men in the British Indian army without untoward effects and with excellent results. During the Boer War, 1900-1902, however, the practice fell into disrepute because a relatively large number of those who had been vaccinated contracted typhoid fever and a considerable percentage of these died. Wright's statistics indicate, however, that the morbidity as well as the mortality among the vaccinated troops was less than half as great as that among the unvaccinated. In the German colonial army in South Africa from 1904 to 1907 the results, also, were not what had been expected, although the statistics show that both the morbidity and mortality among the vaccinated was less than half as large as among the unvaccinated. Another factor which helped to bring the practice into disrepute is the fact that at that time the British army physicians had great fear of the so-called negative phase following each injection, during which period it was thought that the subjects are more susceptible to typhoid infection than normal individuals. It is now definitely established, however, that no such negative phase exists, and during the last ten years the prophylactic has again been extensively used in the British army. The somewhat disappointing results during the Boer War were shown to be due to the following facts:

(a) The vaccine had been heated too high in the process of sterilization and was deprived, to a large extent, of its immunizing properties.

(b) The vaccination was voluntary on the part of the troops and it appears that a great many refused to have a second inoculation, whereas, it is now well known that a single inoculation is of comparatively little protective value.

Since 1907 the vaccine used in the British army has been sterilized by heating at 53 degrees Centigrade for one hour, and the results that have been obtained since that time are excellent. In 1911, for instance, there were only 106 cases of typhoid, with six deaths, among 60,635 vaccinated men, whereas, among 8,477 unvaccinated men, during the same period, there were 64 cases with eleven deaths.

Equally favorable results have been obtained

in the Japanese army since vaccination was started in 1908. Prior to vaccination, in 1903-1908, the typhoid morbidity in the Japanese army was 8 per thousand and the mortality was 1.36 per thousand. Since 1910 the morbidity has dropped to 0.7 per thousand and the mortality to 0.08 per thousand.

In this country antityphoid vaccination has been popularized largely by the work of Major F. F. Russell of the United States army, and that of Richardson and Spooner, of Boston, and Hachtel and Stoner, of Baltimore, and several others. In 1911 Russell published his results of antityphoid vaccination in 11,711 persons. In this large series of cases about 95 per cent experienced little or no discomfort from the inoculation aside from a slight local reaction. The typhoid rate among the vaccinated at that time was only 0.25 per thousand, whereas, among the unvaccinated, for the same period, it was 4.3 per thousand. In the summer of 1911 antityphoid vaccination was made compulsory in the United States army, and the last statistics published by Russell, in 1914, show that there were but three cases with no deaths among the 90,646 troops of the United States army, and two of these had not been previously vaccinated. This leaves, therefore, only one case of typhoid fever among 90,646 vaccinated troops for the year 1913.

Major Russell's statistics are so convincing that it is worth while to study in detail the following table, which was published by him in May, 1914:

TYPHOID FEVER, 1907 TO 1913, FOR THE WHOLE ARMY, OFFICERS AND ENLISTED MEN, AMERICAN AND NATIVE TROOPS—(RUSSELL)

Year	Cases			Deaths			
	Mean Strength	No.	Ratio per 1,000 of Mean Strength	No.	Ratio per 1,000 of Mean Strength	Per cent. of Total Cases	Occurring Am'g Those Who Were Vaccinated
1907....	62,523	237	3.79	19	.30	8.0	.. ..
1908....	74,692	239	3.20	24	.31	10.0	.. ..
1909....	84,077	282	3.35	22	.26	7.8	1 0
1910....	81,434	198	2.43	14	.17	7.1	7 0
1911....	82,802	70	.85	8	.10	11.4	11 1
1912....	88,478	27	.31	4	.044	14.8	8 0
1913....	90,646	3	.03	0	.0	0.	1 0

The results reported by Spooner, Hachtel and Stoner, Weston, Townsend and others in civil life are equally encouraging and convincing. Spooner showed that the typhoid morbidity among the nurses and hospital attendants in five of the largest hospitals in Massachusetts was about 1.4 per cent. prior to vaccination. Among 1,361 nurses and attendants who had been inoculated the morbidity dropped to 0.15 per cent,

whereas, among 674 nurses and attendants in the same hospitals who refused vaccination, the morbidity for the same period was 1.19 per cent, or approximated eight times as high.

Hachtel and Stoner report having vaccinated 2,044 persons without a single case of typhoid fever subsequent to the immunization. Among 309 vaccinated nurses in several hospitals in Baltimore no cases of typhoid fever developed, whereas, among 82 nurses in the same hospitals, who had refused vaccination, seven cases developed during the same period. They also report 887 vaccinations among inmates and employees in a hospital for the insane without a single case of typhoid fever following the immunization, whereas, among 333 unvaccinated patients in the hospitals, during the same period, there were three cases.

Townsend very recently published an experience with 80 nurses, who were employed in nursing typhoid fever patients during an epidemic, which ought to convince the most skeptical. Forty-five of these nurses were vaccinated when going on duty and none developed typhoid fever, whereas, the remaining 35, who refused vaccination, had among them four cases during the epidemic.

Time does not permit the multiplication of statistics of this kind, although other equally convincing results have been published. It must be mentioned, however, that some rather discouraging experiences, also, have been reported within the last two years. Thus, we find that Trowbridge, Finkle and Barnard, of Minnesota, report an epidemic of typhoid fever among 1,522 persons in a school for the feeble-minded and a colony of epileptics, nearly all of whom had been vaccinated only three months prior to the epidemic. Forty-six inmates developed typhoid fever, all but three of whom had been vaccinated, and there were eleven cases among the employees, only one of whom had been vaccinated. It is difficult to say just what was the cause of this dismal failure of the prophylactic, but it would seem that the vaccine had deteriorated, or was improperly prepared. That this may have been the case is indicated by the fact that 64 per cent of those vaccinated gave a negative Widal reaction a few weeks after the administration of the vaccine.

The statistics given by Sawyer, of California,



in 1915, also are somewhat discouraging. Among 8,124 persons who have been vaccinated with thirteen different vaccines by physicians in California, 61 developed typhoid fever within 30 months after the administration of the prophylactic, and four of these terminated fatally. Some of the vaccines used in this series of cases were sensitized and others were not sensitized, but the results seem to have been practically alike. Sawyer concluded that this high morbidity rate among the vaccinated persons may be due to the fact that only those who are repeatedly and extensively exposed to infection will go to the trouble of being vaccinated, and that some of these were infected with overwhelming doses and the immunity broken down. This may, in part, explain the results, but when we consider the very excellent results that have been obtained among nurses who are employed in the nursing of typhoid fever patients, it would seem that other factors must have entered into the California statistics. It is, of course, difficult to say how many of the vaccines used in this series of cases had not been kept at the proper temperature or were too old when administered. No doubt, some persons fail to develop immunity after vaccination.

In spite of these very unfavorable results, we are forced to conclude from the statistics now available that antityphoid vaccination is certainly as effective in preventing typhoid infection as smallpox vaccination is in preventing smallpox infection. It is difficult to say just how long the typhoid immunity lasts, but Major Firth, of the British army, and Major Russell, of the United States army, who have had the greatest amount of experience in this line of work, express the opinion that immunity lasts at least thirty months and in many cases longer.

In order to get good results, it is, of course, necessary that the vaccine be properly prepared and stored and used before it is too old. The vaccine used in the United States army and by Spooner, of Boston, is prepared from an avirulent 24-hour culture on agar, which is suspended in physiologic salt solution, standardized by counting, killed by heating at 53 degrees Centigrade for one hour, and then 0.25 per cent trikresol added as a precaution against contamination. Vincent, in France, uses an autolysate prepared from a 24-hour agar culture suspended in

physiologic salt solution, centrifugated and then treated with ether to insure sterility. Hachtel and Stoner do not use heat in the preparation of their vaccine, but secure sterility by the addition of 0.5 per cent of carbolic acid. Good vaccines are also prepared by the use of heat to 56 degrees Centigrade for 30 minutes, but too high a degree of heat must be avoided. Leishman pointed out in 1908 that the immunizing properties of the vaccine may be destroyed if a preservative (lysol) is added before the culture is heated, whereas, good results were obtained with the same preservative when added after heating. It is very important that a vaccine be stored in a cold place and that it be not too old when used. Vaccines that are kept uniced for a few months are likely to be worthless. The Council on Pharmacy and Chemistry recently advised that vaccines kept at eight degree Centigrade shall not be used after six months from the time of being sterilized, and those which are kept at five degrees Centigrade or less, not after twelve months from the time of sterilization. It appears that vaccines are now being used up to twelve months after preparation, although they are not kept on ice, and it is doubtful, to say the least, whether any protection will be conferred by the use of these products.

*Uses and Contraindications*—Aside from its use in the army and navy, antityphoid vaccination is especially to be recommended for nurses and hospital employees, inmates in hospitals for the insane, schools for the feeble-minded, prisons and other institutions; labor camps, camping parties, vacationists, traveling salesmen, other members of the household where there is typhoid, and the population in general during times of epidemics and where the water and milk supply are not above suspicion.

As contraindications to its use should be mentioned all chronic infections, such as tuberculosis, tertiary syphilis, rheumatism, and also nephritis and other chronic diseases. Some authorities do not recommend its use in persons over 45 years of age, but Weston uses it in all ages, even above 60 years, without harmful effects. Children stand the inoculation better than adults, although the dose must be reduced according to body weight. The usual dose for adults weighing 150 pounds is 500,000,000 for the first injection and 1,000,000,000 for both the second



and third injections, administered subcutaneously at intervals of ten days. It is best not to make the inoculation into the muscle, because then the absorption is too rapid.

Although most of the reported results are excellent, it must be pointed out that there is a great deal of paratyphoid among the vaccinated troops. This has been the experience in the French army in Morocco and also in the Japanese navy. In fact, Kabeshima is of the opinion that paratyphoid is more prevalent in the Japanese navy since antityphoid vaccination has been instituted than before that time. This, however, may not be entirely correct, but is probably, in part at least, due to the fact that no careful bacteriological diagnoses were made to differentiate paratyphoid from typhoid fever prior to the use of the antityphoid vaccine. Very recently, however, Berry reported that there were about 300 cases of paratyphoid among 1,000 troops of the Fourteenth New York Infantry, who were stationed on the Mexican border during the summer of 1916. All of these troops had been vaccinated against typhoid and no cases of typhoid fever were reported by Berry, but the havoc played among these troops by the paratyphoid infection was almost equal to that experienced in a typhoid epidemic. There were no deaths among these 300 cases, but most of the patients became extremely emaciated and were a very long time in regaining their former health and were, therefore, entirely incapacitated for service. Somewhat similar experiences are reported from France, and to meet this situation, many of the troops are being vaccinated against paratyphoid with a mixed culture of the two organisms, *B. paratyphosus* A. and *B. paratyphosus* B., on top of the previous antityphoid vaccination. Kabeshima's experience in the Japanese navy shows that very excellent results can be obtained by this method of immunization. From 1908 to 1911, 28,346 out of a total strength of 40,000 men were vaccinated against typhoid fever; 18,834 of these were later vaccinated against *B. paratyphosus* A. and 11,884 against *B. paratyphosus* B. During the years 1909 to 1911 the typhoid rate among the vaccinated sailors was 2.4 per thousand and the incidence of paratyphoid A. infection was 3.7 per thousand and for paratyphoid B. it was 0. Among the unvaccinated sailors, for the same period, the typhoid rate was

25.08 per thousand and the incidence of paratyphoid A infection was 10.3 and that for paratyphoid B about 16. The mortality among the typhoid patients who were vaccinated was 7.35 per cent, whereas, that among the unvaccinated was 13.4 per cent.

It is evident from the experience in the armies during the last few years that vaccination against paratyphoid is almost as important in some localities as vaccination against typhoid. It is very desirable, however, that immunization should be obtained as quickly as possible and without any unnecessary loss of time on the part of the men. Kabeshima, and more recently Widal, have, therefore, carried out series of experiments to determine whether or not satisfactory immunization can be obtained towards each of the three organisms by the use of a triple vaccine. Both investigators found that animals can be satisfactorily immunized against *B. typhosus* and *B. paratyphosus* A and B by the use of a triple vaccine containing the three cultures in approximately equal proportions. Animals that had been thus immunized with two injections withstood an intra-peritoneal injection of twenty times the minimum fatal dose of the living culture of either of the three organisms. Both Widal and Kabeshima then used the triple vaccines in vaccinating a series of men and observed no more harmful effects than from the use of an ordinary typhoid vaccine. Widal showed that it is possible to immunize men by the injection of three doses of a triple vaccine containing two, two and one-half and three billion bacilli, respectively, mixed in equal proportions. He prefers, however, to use smaller doses in the beginning and to give four injections containing three-fourths, one and one-fourth, two and one-half and three billion bacilli, respectively, mixed in equal proportions. Some investigators, however, prefer to mix the organisms in somewhat different proportion, namely, 50 per cent *B. typhosus*, 30 per cent of *B. paratyphosus* A and 20 per cent *B. paratyphosus* B. In that case the first dose consists of 1,000 million bacilli and the subsequent doses each of 2,000 million.

Prophylactic inoculation against cholera is very similar to that against typhoid fever, but the protection afforded does not seem to be quite as good. Kolle uses 2 mg. of an agar culture,

killed at 58 degrees Centigrade and suspended in physiological salt solution, for the first inoculation, and 4 mg. for the second inoculation. Among 77,907 persons thus inoculated in Japan, 0.06 per cent contracted cholera, whereas, among 825,287 persons not inoculated 0.13 per cent took the disease, or twice as great a proportion as among the vaccinated.

Since the discovery and positive identification of the bacillus of pertussis, sporadic attempts have been made to use a vaccine of this organism in the prevention of whooping cough. The statistics available at this time are rather meager, but those that were properly controlled and are, therefore, worthy of consideration, are very encouraging. Hess, of New York, used five different vaccines in prophylactic inoculations during an epidemic of whooping cough in an orphanage, with fairly good results. Among 244 exposed children, who were given three injections of vaccine, only 20 cases developed, whereas, in another ward of 80 children, where no prophylactic injections were given, 59 contracted the disease. One of the stock vaccines which had been purchased on the market gave very poor protection, whereas, one of those prepared in the research laboratory of the New York City health department gave excellent results. All vaccinations were made with three injections at intervals of three days, using 100, 200 and 400 million organisms to the dose.

Luttinger, also, reports very encouraging results from the prophylactic use of pertussis vaccine. In one hospital ward where pertussis had broken out he vaccinated 23 children and none of them developed symptoms of the disease. One child absolutely refused to take more than one injection and it developed a whoop about ten days after the first injection. The twenty-fifth child in the ward was used as a control and manifested a whoop two weeks later. In a series of nine cases that had been definitely exposed, but exhibited no cough at the time of injection, no cases developed. Among twenty-five additional exposures in this series, who had either a plain cough or a mildly paroxysmal one at the time of the first injection, nineteen stopped coughing during or soon after the treatment. The remaining six cases went through the usual course of the disease, but it should be stated that one of these did not have the prophylactic. The treatment in this series consisted of three injections

at intervals of three to four days, with 100, 200 and 500 million bacteria.

Some attempts have been made to use a streptococcus vaccine as a prophylactic against scarlet fever, but these hardly deserve consideration in this paper. As long as the etiologic agent of this disease is entirely unknown, it appears to be hopeless to attempt to prepare a potent prophylactic.

#### BIBLIOGRAPHY

- Berry, C. W.: *Med. Record*, 1917, XCIX, 135.  
 Black, J. H.: *Jour. A. M. A.*, 1914, LXIII, 2126.  
 Weston, Paul J.: *Jour. A. M. A.*, 1916, LXVI, 1089.  
 Dreyer, Walker & Gihson: *The Lancet*, Feb. 13, 1915.  
 Gaither, J. G.: *Jour. A. M. A.*, 1914, LXIII, 1314.  
 Hachtel & Stoner: *Jour. A. M. A.*, 1912, LIX, 1364.  
 Harris, D. L.: *Jour. A. M. A.*, 1916, LXVII, 923.  
 Hess, A. F.: *Jour. A. M. A.*, 1914, LXIII, 1007.  
 Kabeshima: *Centralbl. f. Bakt.*, Part I, Original, 1914, LXXIV, 294.  
 Kolmer, John: *Infection, Immunity & Specific Therapy*, Saunders, 1915.  
 Leishman, W. B.: *Journal Royal Army Medical Corps*, 1907, VIII, 463.  
 Ibid, 1908, X, 583.  
 Ibid, 1908, XI, 327.  
 Luttinger, Paul: *New York Med. Jour.*, 1915, CI, 1043.  
 Medical News, Canada, *Jour. A. M. A.*, 1915, LXIV, 1086.  
 Richardson, M. W., & Spooner, L. H.: *Bull. Johns Hopkins Hosp.*, 1910, XXI.  
 Russell, F. F.: *Amer. Jour. Med. Sci.*, 1913, CXLVI, 803.  
 Boston Med. & Sur. Jour., 1911, LXIV.  
 Bull. Johns Hopkins Hosp., 1910, XXI.  
 Jour. A. M. A., 1912, LVIII, 1331.  
 Ibid, 1912, LIX, 1362.  
 Ibid, 1913, LX, 344.  
 Ibid, 1913, LXI, 366.  
 Ibid, 1914, LXII, 1371.  
 Jour. A. P. H. A., July, 1911.  
 Sawyer, W. A.: *Jour. A. M. A.*, 1915, LXV, 1413.  
 Spooner, L. H.: *Jour. A. M. A.*, 1912, LIX, 1359.  
 Amer. Jour. P. H., 1909, XIX, 616.  
 Townsend, J. H.: *Amer. Jour. P. H.*, 1914, IV, 993.  
 Trowbridge, Finkle & Barnard: *Jour. A. M. A.*, 1915, LXIV, 728.  
 Vincent: *Bull. de l'Acad. de Med.*, 1910, LXIII, 615.  
 Ibid, 1915, LXXIV, 194.  
 Weston, Paul J.: *Jour. A. M. A.*, 1916, LXVI, 1089.  
 Widal, F., *Presse Médicale*, 1915, XXIII.  
 Wright, A. E.: *Brit. Med. Jour.*, Jan. 30, 1897, page 16.  
 Yagisawa, *Paris Médicale*, 1916, VI, 489.

#### VACCINE THERAPY IN TYPHOID FEVER.\*

S. R. SLAYMAKER, M. D.,  
CHICAGO.

Since the beginning of vaccine therapy in typhoid fever, there has been a good deal of doubt as to its real efficacy. Much was hoped at first, and it is of interest to note the reports in the literature during the recent years. Typhoid fever, like other infectious diseases, varies in epidemics, and care must be used in interpreting any kind of results after treating a few cases with any special line of therapy. One must be extremely cautious about attributing too great or too little importance to the remedies which were used. One must constantly ask himself the question,

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.



Did recovery, if it took place, occur on account of the treatment or in spite of it? He must impartially analyze the cases to ascertain, if possible, the real value of the remedial agent.

The methods employed are, first, the use of killed typhoid bacilli administered subcutaneously or intravenously. The use of a subcutaneous injection is criticized as being too slow of absorption to stimulate antibody formation. The intravenous use seems to be preferable.

Second, the use of autogenous living vaccines, as reported by Rourke, Evans and Rowland.<sup>1</sup> These were used subcutaneously in doses of 60,000,000 to 300,000,000. Three and four injections were given four to six days apart. They report a sharp local and general reaction. Following this there was a drop in temperature below what it had been running and then they felt that afterwards the patient's condition was better.

Third, the use of sensitized vaccine, as recommended by Besredka and also reported by Gay and Chickering.<sup>2</sup>

Fourth, the use of killed bacteria of other kinds than typhoid, as described by Kraus and Mazza. The use of these they describe as producing similar results. Ludka found that not only killed bacteria, but also artificial protein substances, particularly deudero albuminose, would produce similar results.

The most complete analysis has been made by Watters,<sup>3</sup> who has summarized the results in 1,120 cases, of which 158 were treated by himself. His conclusions are that the mortality was somewhat lowered, the relapses less frequent, the complications lessened, and the course of the disease somewhat shortened. The consensus of opinion of those whose cases he has reported seems to be that typhoid vaccines at least do no harm. There is no marked cutting short of the disease, yet he feels that in general the action is beneficial.

Stone<sup>4</sup> discusses the possible beneficial action of typhoid vaccines and feels that the accumulated statistics are not as yet convincing. He calls attention to the fact that from the beginning of bacterial therapy the belief has repeatedly been expressed that little can be expected of bacterial vaccines in generalized infections. He

questions whether the apparent good results would not have followed without the therapy. He points out that the body cells are busily engaged in combatting the poisonous protein groups resulting from the death of the bacterial cells, and in most instances their efforts are successful and recovery takes place. He further urges that the adding of more bacterial protein when the body cells are worked to their capacity does not appear to be justifiable. The stimulus to antibody formation already exists, and there is no need to add more in the average case.

On the other hand, he urges that if the protective responses are retarded, it would be rational to use vaccines that the added stimulus may provoke the proper response. He considers that the evidence of lack of a proper response might be assumed when there is a sufficient leucopenia, marked morning remissions, with a prolonged low type of fever without apparent complications; or, a prolonged low type of fever not due to starvation or complications in individuals of lowered resisting powers, such as alcoholics or luetics.

On the service of Dr. Tice and myself in the Cook County Hospital, and at the suggestion of Dr. Tice, six cases were treated with plain typhoid vaccine and three with sensitized vaccine.

*Case 1.* A female, aged twenty years, was admitted November 18, 1916; sick two weeks before admittance; running a temperature between 102 degrees F. and 105 degrees F., the pulse ranging between 90 and 100. The leukocyte count was about 4,000. On November 21 she received 50,000,000 killed bacteria intravenously. There was a slight elevation in temperature, but no change in the leukocytes. On November 22 she received 100,000,000, with slight elevation in temperature and no change in the leukocytes. Following this for about a week she ran a slightly lower temperature, when it again rose and she died on the 24th of December.

*Case 2.* Female, aged thirty years, was admitted October 16, 1916; sick about nine days, running a temperature between 103 degrees F. and 105 degrees F. On October 18 she received 50,000,000 plain killed bacteria intravenously. This was followed by a sharp rise in temperature to 107 degrees F., then a drop to 98.8 degrees F., with a subsequent rise to 103 degrees F. and 104 degrees F. On October 21 she received another 50,000,000 intravenously followed by a sharp rise in temperature to 106 degrees F., and a gradual drop to 104 degrees F. October 22 and 23 there were chills without special rise in temperature. This was followed by a variable temperature, reaching normal about November 1, when she was discharged on November 8 in good condition. The leukocyte count on

1. Brit. Med. Jour., April 3, 1915.

2. Arch. of Int. Med., February, 1916.

3. Med. Record, 1913, LXXX, 58.

4. Forchheimer's Therapeutics, Vol. VI.

admission was 4,000 and varied between this and 6,000 and was not influenced by the injections.

*Case 3.* A female, aged twenty-three years, was admitted on August 31, 1916; she had been sick for five days, running a typical typhoid temperature. On October 22 she received 60,000,000 killed bacteria, followed by a slight rise in temperature with a drop to normal three days afterward. At the time of the injection she had a cholecystitis and the leukocyte count ran up to 13,000, but was not influenced by the injection. As she had been sick for eight weeks when she received the vaccine, it is somewhat difficult to estimate its real effect. The cholecystitis improved after its use.

*Case 4.* Female, aged twenty-seven years, was admitted to the hospital on September 26, 1916, having been sick for three days before admission, running a temperature of 101 degrees F. to 103 degrees F. On September 28 she received 100,000,000, with no perceptible rise in temperature. On September 29 she received 100,000,000, with a rise to 105 degrees F., then a drop to 99 degrees F., to 102 degrees F. A third injection of 20,000,000 with a rise to 104 degrees F. For the next week she ran a temperature varying from 100 degrees F. to 102 degrees F., and was discharged on October 29. The leukocyte count ran from 3,000 to 5,000 and was not influenced by the vaccine.

*Case 5.* Female, aged forty-two years, was admitted on November 1, 1916, running a temperature from 101 degrees F. to 104 degrees F. On November 10 she received 50,000,000, and thereafter ran a slightly lower temperature and was discharged on December 10. Her leukocytes ran between 5,000 and 6,000 and were not influenced by the injection.

*Case 6.* A female, aged 21 years, was admitted on December 11, 1916, having been sick for fifteen days before admission, running a temperature between 103 degrees F. and 105 degrees F. On December 15 she received 50,000,000 plain killed bacteria, with no change in temperature or in leukocytes. She was discharged on February 2, 1917.

These cases were all treated with the plain, killed bacteria. The following three cases were treated with sensitized vaccine:

*Case 7.* A female, aged fourteen years, was admitted to the hospital on February 28, 1917. The temperature was 102 degrees to 103 degrees F., the white blood count about 7,000. On March 7 she received 25,000,000 sensitized typhoid vaccines intravenously. On March 9 she received a second injection of 50,000,000, followed by a moderate rise in temperature, but no change in the leukocyte count. The temperature became normal on March 28.

*Case 8.* A female, aged twenty-six years, was admitted to the hospital on March 6, having been sick for ten days. The temperature ranged between 102 degrees and 104 degrees F. On March 10 she received 50,000,000 sensitized vaccines intravenously. On March 13 she had a chill and the temperature rose to 105 degrees F. On March 20 she also had a chill

with the temperature rising to 106 degrees F., each following an injection. The white corpuscles were about 5,000 and were not influenced by the injections. She had on entrance a palpable gall bladder which persisted throughout the course. Later in the disease her temperature ran very high and she had a couple of hemorrhages from the bowels. At present she is better, but is still running a temperature.

*Case 9.* A female, aged thirty years, was admitted to the hospital on March 15, having been sick for twelve days. The first dose of sensitized vaccine, about 50,000,000, was given on March 18. There was a moderate rise in temperature but no change in the leukocytes. On March 20 a second infection of 25,000,000 was given and was followed by a chill and a moderate rise in temperature. On March 21 the temperature fell to normal, but on the 22 began rising again and on the 28 she was running a fairly high temperature and had a hemorrhage from the bowels. The white corpuscles remained around 6,000 during the course of the disease.

While these cases are not enough to base any conclusion upon, yet, if we take into consideration the cases reported in the literature that all that is claimed by the most enthusiastic advocates of vaccine therapy is that the course is modified slightly, and that there is no abrupt cutting short of the disease, the nine cases which we have studied here indicate that we do get a reaction in some of the cases following an injection. We have not seen that this reaction was harmful in any way, but it is very difficult for us to see that it was of any decided benefit to the patient. Two of the patients treated with the sensitized vaccine had hemorrhages in the subsequent course. We could, however, trace no relationship between the vaccine and the hemorrhage.

From the reports in the literature and from our observation in these cases we cannot feel very enthusiastic about the routine use of typhoid vaccine in our future cases.

---

## VACCINES IN PERTUSSIS.\*

HENRY W. CHENEY, M. D.,  
CHICAGO.

With such a common and almost universal disease as whooping cough and one in which the hundreds of remedies tried in past years have been so ineffective, it is quite natural that the new vaccine therapy should receive a thorough

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.



tryout in the treatment of this troublesome disease.

I have had some personal experience in the use of pertussis vaccine which I wish briefly to review with you.

The organism of whooping cough was discovered in 1906 by two Belgian investigators named Bordet and Gengou, and so it has since been called the Bordet-Gengou bacillus. This organism has been regularly found in the secretions of the upper respiratory tract during the early stages of the disease. Autogenous vaccine has been prepared and used by some physicians, but I have used only the stock vaccine put out by the larger pharmaceutical houses, as this seems as effective as the autogenous vaccine and has been more generally used. My preference has been for the so-called combined or polyvalent vaccine which includes not only the pertussis organism, but also the other organisms found in the air passages, namely, the pneumococcus, influenza bacillus, micrococcus catarrhalis, streptococcus and staphylococcus. I use this vaccine because I believe that most cases of whooping cough before they have run very long become mixed infections, these other organisms mentioned having something to do with the severity of the disease as well as the Bordet-Gengou bacillus. This vaccine is given hypodermically, of course, and I use larger doses than at first recommended. To babies one or two years old I give one hundred millions for the first dose or two, doubling this dose later. For older children I have given two or three hundred millions to begin with, doubling or trebling this amount for subsequent doses. There has been some difference of opinion in the past as to the proper interval between doses, some advising an injection every two days, others every four or five days. I have found best results by giving an injection every three days. From four to six treatments will usually be all that is required to get results. The younger children often object to the treatment as they would to any hypodermic injection by crying and struggling, but the older ones receive it with little or no trouble after the first injection. I give it in the arm being easy of access. There is no reaction either local or general after the injection. I have seen no sore arms nor any fever or prostration. There is no condition of anaphylaxis produced in the patients because the vaccine does

not sensitize the individual as a foreign serum does. Some authorities recommend the prophylactic use of pertussis vaccine by giving three doses at intervals of three days. I have made no extended use of the vaccine as a prophylactic, but Alfred Hess of New York used it in an epidemic in a children's institution and of 244 cases given vaccine prophylaxis, 21 contracted the disease, while among 75 who did not get the vaccine 59 had the disease. Other observers have good reports of preventive vaccination.

My experience has been in the treatment of children in private practice using the vaccine as a curative agent and the results have been most encouraging. The ages of the patients varied from six months to ten years and in all of them I waited for the characteristic whoop to develop before beginning treatment, so that the diagnosis was sure in every case. I can say that over 90 per cent. of the children improved and in at least one-half of the cases the paroxysms were stopped within two or three weeks.

The beneficial effects are noted in four ways: first, the number and severity of paroxysms is decreased; second, the vomiting soon stops; third, the little patients sleep better; fourth, the disease is shortened.

In some of my cases the results obtained were as brilliant and as striking as those we see after the use of antitoxin in diphtheria. I have had some little patients who were having eight or ten severe paroxysms at night and after the first injection the spasms were cut down to two the next night. The parents of some of my patients noticed how much milder the disease was in their children and how much shorter the course when compared with the neighbor's children who had not been given vaccine treatment.

Authorities on diseases of children vary as to the duration of whooping cough, giving the time all the way from one month to four months. In the face of this we surely should consider the value of the treatment which shortens the period to 20 or 25 days. Of course, we do not expect remarkable and striking results in all cases, but the improvement begins almost at once and I keep on giving the vaccine until the whooping stops, which is usually in two or three weeks. In my series of cases there were no cases of pneumonia or other complications and no deaths. When we consider the seriousness and high mortality of whooping cough in babies under one year, we

should welcome a treatment which promises such good results. An additional advantage is that it can be given hypodermically and thus does not upset the stomach of these little ones as medicine given by mouth might do.

In New York City is established what is called the Whooping Cough Clinic, and from this clinic is reported the largest series of cases treated with vaccines. Dr. Paul Luttinger, in charge of the clinic, reports 1,500 vaccine cases and says there was not a single death where vaccine treatment was begun before the third week and continued regularly. From his experience and that of other doctors he believes that vaccines are of great benefit in the treatment and have undoubtedly reduced the number of deaths and prevented the spread of the disease. Besides the vaccine treatment I insist on having as much fresh outdoor air as possible for the patients, as that is one of the best aids we can employ.

Among the innumerable drugs recommended in the past for whooping cough the practitioner may be bewildered and too often adopts a do-nothing policy which means for the little patient and his family six to ten weeks of a very distressing sickness or even a fatality.

As an antidote for this confusion and uncertainty of remedial agents I desire to urge a thorough trial of vaccine treatment for pertussis which, in a large number of cases, has given most gratifying results.

25 E. Washington Street.

#### DISCUSSION ON SYMPOSIUM

##### (Abstract)

Dr. Simpson, of Palmer, stated that to immunize the National Guard last summer a friend made four hundred and fifty liters of vaccine in thirteen days—something like one hundred and twelve gallons. When you know that thirty-eight drops of that is sufficient to immunize each soldier you can know how much good was done in that thirteen days' work by one man.

He thought it would be wise for any of the physicians who join the Reserve Corps to take that treatment early. Typhoid fever is a very serious thing for one above forty years of age.

As to the failure of typhoid vaccinations, one must expect a failure occasionally, for you know the old saying that "the exception proves the rule."

Dr. E. M. Sala stated that he had some very good results with the combined catarrhal vaccine in the treatment of pneumonia, but approved the limit that Dr. Cheney put on them and advised changing the treatment.

Dr. Schmidt stated an observation he made in 1914 with antigenococci serum, using massive doses. At that time he noticed in analyzing the case records that no beneficial result was obtained with antigenococci serum prior to about the seventh or eighth day after the last injection.

Temperature began on the seventh day. Each patient gave a history of having broken out into hives with a sharp temperature rise, joint pains, chills, etc., so it led him to the belief that it was in reality not the anti-gonotoxic part, or the anti-toxic part of the anti-gonococcus, but perhaps the anaphylaxis itself had a therapeutical value.

It was very easy to prove that matter by substituting normal serum for anti-gonotoxic serum and, strange to say, exactly the same results were duplicated.

But in one case of acute epididymitis in the Cook County Hospital a man was injected with ten cc. of normal serum and within fifteen minutes he developed acute epigastric pain, puffiness under eyelids, nausea, vomiting, no temperature rise, man looked pretty sick. In questioning, it was discovered that the man was a teamster and his constant association with horses undoubtedly sensitized him.

Dr. Melton has used the pertussis vaccine with good results in one baby seven months of age, a very thin, delicate child, one with poor digestion and a case of catarrhal pneumonia.

To overcome the fear of the child referred to by Dr. Cheney he found it could be overcome in almost all cases by simply using plenty of phenol solution on the surface of the skin for a minute or a minute and a half prior to the use of it. You can use it in most cases and they won't know what you are doing. One little girl, three years old, suggested to her sister in a very gentle way after he had gone that she didn't like the doctor because he pinched her body and she knew nothing at all about injecting medicine into her.

Dr. Nieberger suggested that the use of phenol to relieve sensitiveness is applicable to older people who are very sensitive to pain as well as to children. He also referred to the use of ethyl chlorid to avoid causing children pain when injecting antitoxin for diphtheria. He warned against the use of serums or other biological products that have not been kept in refrigerators.

Dr. Davis: There is just one point I should like to emphasize and that is the necessity for controlled observations. Now this whole subject is in the experimental stage. We are making these experiments right along on human beings, there is no question about that, and I think we are justified in so doing as long as we are reasonably careful and sure that we do not do the patients any harm. We should not forget the fact that we are experimenting and furthermore I think it is wise to say that in our observations one-fifth should be direct observation and four-fifths controlled observations, and I think in all of this work where these various substances are tried, we should divide the patients into at least three series, giving one, for instance, the ordinary treatment, no



vaccine at all; the other perhaps specific vaccines and the other third more or less indifferent substance, or some other substance like proteose, and then we would gradually get a body of data that would be comparable and throw some light on this very difficult subject.

Dr. Ruediger: In connection with this work on specificity and non-specificity, I want to say that the statistics in regard to the immunization indicate that the anti-typhoid vaccine is specific for that organism and not for the paratyphoid. The immunity for paratyphoid organisms doesn't protect against typhoid organisms; neither does the paratyphoid vaccine protect against the paratyphoid body vaccines. There seems to be an absolute specificity.

I want to emphasize the importance of using an anti-typhoid vaccine in families where there is a case of typhoid. A good many physicians still have a fear that they might produce a negative phase and that an individual would be more likely to take typhoid at that time than if he were not injected with the vaccine, but it is advisable to urge upon the other members of the family to take the anti-typhoid vaccine if they have a case of typhoid in the family, just as we advise nurses to take the anti-typhoid vaccine when they go on duty for nursing a case of typhoid.

Dr. Slaymaker: I just want to say that the cases that we reported here we realize are small in number, and too quick conclusions must not be drawn upon them. The principal point we would like to emphasize is this: That the most enthusiastic reports in the literature claim very indefinitely that perhaps the course is shortened a little bit, that the complications are less frequent and that with the personal observation that we have made, we are led to feel that very little must be hoped for, can be hoped for, in the routine of the typhoid vaccine as a therapeutical measure and anyone undertaking or trying this must be prepared to be somewhat disappointed as to any sudden cutting short of the disease.

Dr. Cheney: I am not quite convinced in my own mind that pertussis vaccine as now prepared is the best remedy that we shall discover. It is quite possible that we will find some better solution to use. I am going to experiment along that line myself. Other solutions have produced results, but I recommend to you the pertussis vaccine as prepared at the present time for it certainly does give results.

## TIMELINESS IN THE APPLICATION OF RADIUM.\*

ALBERT WOELFEL, M. D.  
CHICAGO.

Until quite recently the exponent of the subject of radium therapy in such a gathering as I have the honor to meet here, has generally approached his hearers as though there was a cer-

tain burden of proof resting on him; or he has felt it incumbent upon himself to frame his remarks as though he were bearing a new message to the greater part of his auditors. He has felt hitherto that it was required of him to set forth as more or less of an extraordinary phenomenon the fact that the radiations from radioactive matter have a peculiar or quantitatively a selective effect on certain forms of diseased tissue. He has had to explain that this phenomenon, rightly employed, could most usefully be turned to therapeutic account, and to carry conviction he has had to present an array of concrete cases and descriptions of the experiences of others.

The time allotted me today is not sufficient for me to follow that line of exposition. Moreover, it is unnecessary now, I trust. The time has arrived in which one may be permitted to take for granted that it is no longer called for to urge these things on most of you. It will be generally acknowledged that the use of radioactive matter for therapeutic purposes has now emerged from the mere experimental stage, that it has proven its worth as an addition to the armamentarium of therapeutics. Indeed the more enthusiastic are suffered to assert that it is well nigh indispensable in certain disorders and even irreplaceable in some conditions.

I have, therefore, chosen today to forego any plea for the recognition of radium or other radioactive substances as therapeutic agents, but rather to direct my remarks along a line which may be indicated by the theme I have chosen, namely, "Timeliness in the Application of Radium."

It is but the survival of an old habit for commentators on radiotherapy to still express their misgivings as to whether our knowledge of the proper dosage, screening and exposure in the use of radium is certain enough yet to warrant any advocacy of the general use of radium. Of course, these things are the essentials in the technic of radium therapy. The warning may naturally be sounded that unless regard is had for these essentials, radium treatments will not only be of no avail, but can cause more harm than benefit. All of this is most obvious, but it is equally obvious that this is not peculiar to the practice of radium therapy.

It must be admitted that radium therapists are as yet far from being in reasonable accord about the dosage and kind of applicators to use in all cases. The technic is far from having

\*Read before the Sixty-seventh Annual Meeting of the Illinois State Medical Society, Bloomington, May 9, 1917.

reached a point of standardization, even if that were desirable. The working out of these matters, however, is now far enough advanced by those who are more intensively engaged in the practice of radiotherapy and observations of its results to make whatever general apprehensions there used to be about the practice hardly tenable any longer.

Little attention has, however, been devoted to other factors than lack of standard methods of applying radium, that stand in the way of advance in radiotherapy and a fuller realization of its benefits.

In order that radium can be most efficiently used, there is another line of consideration that should be brought to the notice of the non-expert in radiotherapy, the practitioner who has need to call on the co-operation of the radiotherapist. There is always an optimum time in the history of a case for the use of radium. Full justice to the capabilities of radium as a therapeutic agent depends on the time in the history of a case at which it is called into service. It is preposterous to expect radium to be equally efficacious at any haphazard time in the history of a case.

While, of course, this justice to the capabilities of radium and its good reputé as a therapeutic agent are very near to the radiotherapist's heart, there is, in the light of our present knowledge, enough to be gained for the general welfare to warrant the admonition to every practitioner to cultivate an appreciation of the uses and limitations of radiotherapy, just as he should know the value of any other medicament or operative procedure. Indeed, it is being stigmatized as remissness, or something worse, by many clinicians to withhold the possible benefits of radium therapy in certain cases.

In a case of malignancy it is now more incumbent than ever upon the practitioner, before proceeding to operation, to weigh most carefully the possibilities in the outcome of an operation. If an operation is done in the face of a fair certainty that there will be a recurrence of the malignancy, it is an attitude severely to be decried in him, who, without doing anything else, would justify himself by saying that if operation fails, there is radiotherapy to fall back upon.

It is most disappointing to the radium therapist to have cases presented to him only after the operator has reached the end of his

resources, because the radiotherapist generally feels that an earlier collaboration between operator and himself would have been more satisfactory. But until practitioners generally have gained a proper cognizance of the field that radium can rightfully claim in therapeutics "the shifting of the burden" to the radium therapist, or the attempts to do so, are ordeals that he will have to take somewhat as a matter of course.

It is no elation to the radium therapist to have a practitioner, in turning over a far gone case, to say in effect, "I have recommended radium in this case, not because I have any great hopes from its use, but in order to be doing something for the patient." This is an example of untimeliness in the use of radium that we would remonstrate against.

A well conceived line of treatment even in an operable case will always keep the possibilities of radiotherapy in view. For cases that are operable, but in which experience shows there is a high probability of recurrence, it may be rash at present to say that it were better to leave the whole treatment to irradiation, but it is a view that has been expressed and is likely to gain adherents. At all events, it is permissible to point out in a case of malignancy operated on, followed by recurrence, what the advantage would have been had radiotherapy been applied earlier in the case.

The ever present danger in operation of promoting an early dissemination of the malignancy is one of the disadvantages that would not have been incurred.

The more contracted field in which the radiations would be required to exert their action in a case before recurrence after an operation with its oft-times forbidding erosions and breaking down of tissue is, of course, an obvious advantage.

In cases where distant metastases have formed, there is nothing more than a checking of the malignant process in the immediate region of irradiation to be hoped for. Or even in cases where the recurrence is in an accessible region, the recurring lesion, as experience has shown, may be more refractory to irradiation than the original lesion. This is particularly true of metastases in the submaxillary lymph-nodes formed as sequels to epithelioma of the lips or buccal cavity.

These latter considerations of what might have



been done with radium alone on a case, will probably gain scant respect as yet, but they do call up a capability of radiotherapy that can not be caviled at. This is the prophylactic power of irradiations, which is something possessed by hardly any other therapeutic agent. This is indeed a use of irradiation that has not as yet received the attention it deserves. We are not yet in a position to state that prophylactic irradiation after an operation for malignancy will prevent recurrence, but English and continental radiotherapists have gathered enough data out of an extensive experience to assert with confidence that recurrence can be retarded.

The greater obstinacy to irradiation treatment of fully formed metastases and the greater possibility of affecting metastases in their incipency, marks the period soon after an operation, in cases operated on for malignancy, as a time for radium application. It behooves the practitioner, therefore, to consider after every operation for malignancy whether treatment is complete without prophylactic irradiation soon after.

Though my main object today has been to present for your consideration what greater benefits from radium might be had in many cases, if it were called into use earlier, my remonstrance against putting off the use of radium does not of course imply that the use of radium in late and desperate cases is to be considered merely as making a showing of "doing something for the patient." The alleviative and arresting effects of radium even in far-gone cases of malignancy usually make its employment worth while. Yet, of course, there are far-gone conditions in which even the most cautious application of radium is forbidden. Such are cases where the status is such that there is danger of fistulac, or perforation of hollow organs, being caused by the reduction of a malignant mass.

In conclusion I would reiterate my plea that practitioners should always bear in mind the capabilities of radium and reiterate my remonstrance against that inclination all too prevalent for practitioners to regard radiotherapy as something apart, as something that as yet has gained no place in the general scheme of practice. It is by careful collaboration between operator and the radiotherapist that not only the advance of radiotherapy is to be promoted, but also the best interests of the diseased safeguarded.

## DISCUSSION.

Dr. Melton (Warrensburg) had become convinced that radium is one of the most useful therapeutic agents recently placed before us.

To see the various abnormal conditions that are righted by the use of irradiation, to see what we believe to be permanent benefits and the joy that it brings to many an individual who undoubtedly soon would advance to degrees of severe abnormality with various conditions that we treat in this way makes us believe that we, as general practitioners, should inform ourselves enough to know a case should be treated by irradiation instead of by surgery.

Dr. C. W. Hanaford (Chicago) quoted Dr. John G. Clarke, of Philadelphia, who, after study of some two hundred and sixty-three cases of malignancy of the uterus, stated that he believed that in the future there would be fewer operable cases from the point of desiring to operate than in the past and, therefore, a greater number where radium would be used.

The point to remember in the use of radium is this: That the Gamma rays have a distinct penetration.

We know from cases that have been treated with radium that have died from some intercurrent disease and where a post mortem has been held, that the Gamma rays have reached to the depth of four centimeters. Radium doesn't destroy tissue; it replaces one kind of tissue for another.

He stated the treatment of an ulcer at the vault of the vagina following a hysterectomy for cancer by the application of 51 milligrams of radium heavily screened for 59 hours in 12-hour intervals. The case was examined yesterday, three weeks after the last application and all of the ulcer is healed, there is absolutely nothing but healthy tissue there. It is slightly red.

Dr. Pennington understood the last gentleman to say that radium wouldn't destroy tissue. He has a patient in the hospital at the present time who has a stricture of the rectum as the result of the application of radium, and he suffers a great deal of pain with it.

Dr. Baird (Galesburg) related an experience in the use of radium similar to Dr. Hanaford's.

His patient had had hysterectomy just as soon as she had been informed she had carcinoma. The operation was performed by a very noted, successful surgeon and within three months she had a recurrence at the vaginal vault. There were no erosions as Dr. Hanaford mentioned in his case but the mass was plainly discernible just to the left side of the vaginal vault, extending up in the lymphatic gland.

Supplied by the Physicians' Radium Association with fifty milligrams, and under their instructions he applied it for five or six twelve-hour sessions. This completely relieved this patient of her pain within four or five days, and she discontinued the use of morphin. Before that time she had taken two or three grains of morphin in a hypodermic a day. She left the hospital and returned three weeks later for

examination and this mass had apparently all disappeared with no soreness or tenderness. One week later she came back and the pain had reappeared and her physician had again commenced the use of morphin. The association again advised the use of radium for two thirty-six-hour sessions, with a lapse of about twelve to twenty-four hours between them. This gave no relief and the patient is one of the untimely cases that Dr. Woelfel has mentioned.

He would like to have Dr. Woelfel state how would he apply his radium in doing hysterectomy for a carcinoma where no secondary involvements are found. Would he apply it in the vaginal vault or just where would he place it?

Dr. Christian (Quincy) offered himself as an exhibit in this matter, having had a little lesion on his nose treated rather indifferently and haphazardly with x-ray applications and carbon dioxide through a good many years without any benefit. After noting that the lesion was probably beginning an eroded ulcer he consulted Dr. Case a year ago.

He was disappointed in the beginning because there was no reaction, nothing to show from the treatment for a number of days. Then a little surface epithelial scaling and that was the end of his nose bleed and there seemed to be no destruction whatever of tissue.

The Chairman: If there is no further discussion, for the information of the society the Chair will take the liberty of asking Dr. Hanford to answer Dr. Pennington's question as to destructibility.

Dr. Hanford: I perhaps was confusing in my remarks regarding the destruction of tissue. The ray doesn't destroy tissue, that is true, but the healthy tissue is repaired. You will find in cutting through an irradiated area that it cuts like tissue.

Dr. Woelfel (closing): With regard to the question that Dr. Baird has put to me as to how radium would be applied after a case of hysterectomy, such as he describes: the operation would be completed as they used to be when prophylactic irradiations weren't used and the irradiations applied as closely to the site of the operation as possible. Some radium users apply the radium immediately after operation, or even sew it into the operation wound. But objection has been raised to the application of radium to a fresh operation wound, it being said that irradiations, intense enough to have the desired prophylactic effect, will reduce the power of the tissues to resist infection, or that tissues that have been subjected to trauma cannot withstand long irradiation; hence the irradiation should be postponed until there is restitution. I must say, though this objection is pretty generally disregarded and no such adverse effects have come under our direct notice yet, the prophylactic irradiation will generally be of as much avail four weeks after operation as immediately and it has been my practice to prescribe prophylactic irradiations four weeks after operation.

Concerning that question put to Dr. Hanford about the destructive action of radium rays: The statement which called forth the question, lies outside the limits

I set for myself in my paper and is, moreover, so much at variance with the fundamentals of radiotherapy, that I hardly feel called upon to deal with it. Since, however, the statement was called in question and more confusion than ever was added to the matter in the answer, Dr. Hanford having previously stated something about Gamma-rays and in his answer said something about Beta-rays, I beg leave to touch upon the point. Gamma-rays, used within certain limits of intensity have a transforming rather than a caustic action on tissues, but of course, Gamma-rays used very intensely will also cause destruction of tissue. Hence the unqualified statement that Gamma-rays do not destroy cells is most objectionable.

## ROENTGEN DIAGNOSIS OF LUETIC LESIONS.\*

EDW. S. BLAINE, M. D.

Roentgenologist Cook County Hospital; Instructor in Roentgenology Northwestern University Medical School; Head of Chicago School of Military Roentgenology.

CHICAGO.

Several of the lesions of syphilitic origin which invade the body tissues can be demonstrated by the x-ray method of diagnosis. These lesions can be readily recognized by characteristic shadows on the roentgenogram. In certain other



Fig. 1.—Skull—Syphilitic Osteo-porosis.  
Note "moth-eaten" appearance of vault.

forms it is very difficult and in some instances impossible to detect their presence.

Syphilitic lesions which attack the osseous tissue occur in the hereditary and tertiary stages (sometimes late secondary) and these present the least difficulty in their demonstration on the x-ray plate. This is due to the greater relative difference of shadow density on account of the altered amount of calcium content in the involved bone

\*Read at the 67th annual meeting of the Illinois State Medical Society, May 9, 1917.



tissues. Regarding the softer tissues, several reports have recently appeared in medical literature, describing the x-ray appearance of gumma of the stomach. On this subject, let me state that the x-ray diagnosis of luetic ulcer is at best a precarious one. It is all very well to hold that a given gastric shadow defect with stomach analysis pointing to ulcer with a positive Wassermann is syphilitic, especially if a subsequent x-ray study following anti-syphilitic medication shows a lessening of the defect. Post mortem



Fig. 2.—Leg—Luetic Osteitis.  
Note saber deformity due to localized hypertrophy on one side of shaft.

work at Cook County Hospital rarely reveals syphilitic stomach lesions. We also hear of luetic involvement in other abdominal organs and there have been a few reports presenting the x-ray evidence of pulmonary gumma. The roentgen appearance of luetic aortitis is rather well substantiated; a dilated or increased aortic shadow with a history of specific infection and positive Wassermann all fit very well

with the actual finding. The roentgen method is of distinct value in the study of syphilitic lesions involving the bone structures. The question of "lues or not lues" so often presents itself to the clinician that he more frequently calls on the roentgenologist to aid in the diagnosis.

*Luetic Periostitis:* Normal periosteum is not recognizable on the roentgenogram as such. When it can be seen, it is due either to trauma or pathological change. When the site of a luetic periosteal invasion is confined to a small area and is distinctly localized, it will be seen to present shadow changes greater or less in extent according to the amount of involvement. It is difficult to distinguish the x-ray shadow changes of periosteal syphilis from periostitis due to some other diseases, such as simple inflammatory periostitis. When definite the shadow change may vary from a very slight erosion or roughening to an extensive "furring or raggedness." In the earlier stages of luetic periostitis it will be noticed that the outline of the bone is not changed or broken, but it will be less sharp and less distinct than is found in the normal bone shadows of the part under observation. If this is the case, it will be difficult to state definitely that the condition is a luetic change from the plate alone, but with a clinical history suggesting lues, this evidence will be of material aid in the diagnosis. It must be remembered that such an appearance may also be due to a non-specific cause as, for instance, an early osteomyelitis. One of the most frequent sites of luetic periostitis is that of the anterior margin of the tibia. Given a case in which the x-ray plate indicates a periosteal change such as has just been described, one may still be in doubt as to its significance. A Wassermann test will serve to clear up the question in most cases.

In the presence of an apparent hypertrophy of the periosteum on the anterior portion of the tibia, it is rare to find this to be smooth and regular in outline if the process be luetic. A luetic tibia which shows no erosions of any kind is most unusual and is quite likely a non-specific change. A luetic periostitis usually will not be confined to the periosteum alone, but will extend into and involve the subperiosteal and underlying cortex of the bone.

*Sub-periosteal Gumma:* A sub-periosteal gumma will be recognized by a definite lifting

of the periosteum under which are shadows of greater or lesser density according to the consistency of the tumor or amount of additional bone deposit which is the particular characteristic of lues. When the center of this mass breaks down and becomes gelatinous, the shadow will be darker than the surrounding bone and will have the appearance of a simple bone cyst without trabeculation. These have been termed "syphilitic bone blisters."

A "bone blister" may be revealed at the site of pain, confined to the shin bone. This has a

bone lesions, lest we mistake this normal appearance for a pathological indication.

*Luetic Osteitis:* Lues of the cortical bone is also seen to be an hypertrophy of osseous tissue and is usually confined on one side of the shaft of a long bone when first seen on x-ray examination. It is only in the later stages that it involves the entire shaft of the bone and this takes place by extension, although in hereditary syphilitic osteitis one-third to even the entire bone may be equally involved on all sides. This is often seen in the forearm and leg where the entire



Fig. 3.—Knee—Charcot's Joint.

Note disorganization and evidence of downward pressure causing the bones receiving the weight to give way.

characteristic appearance and is significant of a luetic process, although in some instances a typhoid osteomyelitis is present, the shadows being almost identical. Too often has antisiphilitic treatment been pushed to tolerance and even beyond in a case of periostitis following typhoid. We must remember, too, that the normal proportions of the tibia are such that the anterior portion is about twice the extent of the posterior, as seen on the lateral roentgenogram; thus we must be careful in the diagnosis of tibial

radius or ulna or vice versa may show such extensive involvement to the exclusion of the other bone. When the process invades a flat bone, the roentgen appearance and resulting shadows are likened to a "moth-eaten" appearance. The process extends in an irregular manner more or less equally in all directions until the entire bone is involved, giving a marked picture of osteoporosis. It is relatively infrequent that the x-ray studies reveal any involvement of the joints, although infrequently this does take place.



The lesions of luetic osteitis are invariably multiple, although one may find the tibia only involved if the infection be in the early stage. An enormous hypertrophy of the tibial cortex anteriorly resulting in raggedness and furring is spoken of as the "sabre-shaped" deformity seen often in children with hereditary syphilis. If a portion of the dense hypertrophied bone breaks down and liquifies, a cavity appears on the x-ray plate and brings to mind the appearance of a bone cyst. However, in syphilis it is rare to see trabeculations in such an area.

*Syphilitic Joint Lesions:* The joints, when affected, show a considerable amount of destruction and the usual outlines show more or less variation according to degree. It has been held that syphilitic arthritis is too frequently overlooked on the roentgen examination, but we must admit that, when confined to the softer tissues of a joint with practically no rearrangement of mineral content of the bones entering the joint, that the x-ray physics is such that such information is difficult to obtain. By extension a specific exudative arthritis or an osteo-chondritis may invade the epiphyseal bone area. Here one finds that the roentgenogram reveals a localized disappearance of bone neighboring the joint surrounded by a more dense area of hypertrophied bone. When the luetic process has invaded the neighborhood of a joint this is frequently secondary to a diaphyseal invasion. The shadow appearance will be seen to be distinctly roughened in outline, due to a definite decrease in bone density and loss of the usual striations of normal bone. The more the articular surfaces are involved the more will be the destruction of the apposing surfaces of the bones of the joint.

*Specific Arthropathy:* Charcot's joints have rather a characteristic roentgen appearance. The shadows represent bone changes of the involved joints according to the degree of trophic disturbance. This may vary from a slight irregularity of outline which cannot be distinguished from an early arthritis deformans to an enormous joint destruction in which all semblance to the normal joint has been lost. These lesions sometimes involve one or more of the vertebral bodies. They may be found in any one of the joints of the body, although the most frequent site is the knee joint, and secondly the ankle. It is usual to find that the bone which is on the under side of a joint, as, for instance, the tibia of the knee, will

show evidence of the super-imposed weight causing it to give away—thus the upper portion of the tibia shows far more destruction than the articular portion of the femur of the same joint. These joints are all characterized by a relatively small amount of pain or even total absence.

#### DIFFERENTIAL ROENTGEN DIAGNOSIS.

*Osteomyelitis:* It is usual to find the meta-



Fig. 4—Leg—"Paget's Disease"—Osteitis Deformans.

Note: all portions of shafts are affected to equal degree, due to generalized hypertrophy.

physis involved, as in the case of lues, but in the latter the involvement is usually on one side of the shaft and is essentially a hypertrophy of bone, while an osteomyelitis has all portions of the shaft about equally involved and the bone density is irregular, showing some localized increase and some localized decrease. Osteomyelitis frequently leads to sequestration, while in lues it is rare to find such a sequel. In hereditary lues in

children one may be at a loss to determine whether the shadows present may be due to rickets. In the latter condition there is greater epiphyseal disturbance with marked curving and bone deformities which do not occur in lues.

*Typhoid Osteomyelitis* simulates very closely the bone changes of a lues, and one must be careful to get the full history in each instance. Typhoid osteomyelitis may be confused with the sub-periosteal type of syphilitic change.

*Tuberculous Osteitis*: In this disease the process is more often an epiphyseal invasion rather than a diaphyseal process, although the shaft may become secondarily involved in tuberculosis. In a tuberculous arthritis there will be a far less furring or raggedness with a greater degree of haziness. A tuberculous spondylitis will be seen to result in a greater collapse of the involved vertebral bodies than is the case in lues with an outline of the surrounding cold abscess in the spinal muscles and fascia.

*Bone Abscess*: Simple bone abscesses are seen to be quite large in size and will be surrounded by a wall of increased bone density. When they become very large, one may find considerable trabeculation throughout the area involved.

*Gout*: The erosions due to gout may simulate an osteo-chondritis luetica, but the history will make it less necessary to consider a luetic change. Charcot's joints in the earlier stages cannot be distinguished roentgenographically from a pronounced arthritis deformans; in the latter condition the greater amount of pain will serve to assist in a diagnosis.

*Sarcoma*: In osteo-sarcoma the most frequent roentgen appearance is that of melting away or disappearance of bone at the site of tumor. In lues it is very rare to find a bone disappearance.

*Carcinoma*: In osteo-carcinomatosis we find irregular decrease of bone, but practically no hypertrophy as in the case of lues.

*Osteitis Deformans*: Difficulty will sometimes be encountered in differentiating the x-ray shadows of bone changes due to Paget's disease from those of lues. In both conditions the essential feature is a bone hypertrophy, but the history in the two conditions is dissimilar and the arrangement of the bone increase is different. The shadows of Paget's disease reveal a progressive increase in the general bone system, more or less diffuse throughout. The patient first notices an increase in the size of his head; his hat becomes

too small or he finds that each new hat has to be of larger size. In Paget's disease there is a marked curving and bending of the long bones, a prominent feature in this conditions. This rarely occurs in syphilis, excepting the curving or bowing of the "saber-shaped" tibia, which is a characteristic finding in lues. The x-ray appearance of the changes in the head in both conditions will sometimes be confusing on account of the apparent similarity, but a Wassermann test is negative in osteitis deformans. In lues of the skull bone the change is largely an osteoporosis; in Paget's disease it is a diffuse hypertrophy. The hypertrophy involves all sides and all portions of the bones involved, whereas, in lues, usually one side only is affected, which, however, may later involve all parts of the bone.

#### DISCUSSION.

Dr. Bain confirmed Dr. Blaine's point, that the Roentgenologist can never be certain about the diagnosis of syphilis from the appearance of the x-ray plate. The attending physicians often are too quick to accept a suggestion on the part of the Roentgenologist that the possibility of a syphilitic lesion exists for an absolute diagnosis. In order to make a diagnosis of syphilis, all of the evidence available, and all that the Roentgenologist can do is to suggest a line of further investigation.

Dr. H. W. Grote (Bloomington) thought the Roentgenologist must assume the greater responsibility in diagnosing syphilis in the very late hereditary and very late acquired cases. These do not show the spirochaeta quite as distinctively.

Dr. Blaine (closing): There is nothing, except to add that cooperation is the thing. It is a case of team work with the man who refers the case. Send an outline of the clinical aspect and the careful roentgenologist can render more help in his interpretations than can be given when a blank order is presented to x-ray this or that part.

730 Monroe Building.

#### FRACTURES OF THE PELVIS AND RESULTING INJURIES TO THE URETHRA AND BLADDER.\*

H. C. MITCHELL, M. D.

CARBONDALE, ILL.

When I decided to write a paper on this subject, it was not my intention to give an elaborate and finished technique on these forms of injuries, but rather to suggest some plan, be it ever so

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.



elementary, by which any one who does surgery can save the lives of these patients.

As to just what your experience has been with this class of injuries, I do not know, but formerly I ran a pretty high mortality.

As we all know, that with the greatest amount of skill we can bring to bear on these cases, they are very grave in character, and are such as to give the surgeon grave concern.

While these cases do not come to the railroad surgeon as often as they do to the mine surgeon, yet we are frequently called on to treat these forms of injuries.

While it is estimated that less than 60 per cent. of the pelvic forms of fracture are complicated with injuries to the urethra and bladder, or both, yet it has been my misfortune to have treated but few pelvic injuries that did not at least involve the urethra.

*Symptoms of pelvic fracture:* While there may be practically no deformity in fracture of the pelvic ring, there is usually quite marked shock, which is manifested by pallor, anxious expression of countenance, feeble pulse, cold, clammy skin and weak voice.

There is always manifest a sense of insecurity on the injured side when an attempt is made to stand on the feet, and usually some outward rotation of the limb.

Oftentimes the deformity may be very marked, and yet it is obscured by the tumefaction and extravasation of blood or urine in the tissues.

Crepitation may be manifest when any attempt is made to move or lift the patient. Pain is always manifest when the patient is moved to any appreciable degree.

The greatest care should always be exercised in rotating the limbs, for fear of producing further wounding of the adjacent viscera; in fact, there should never be any attempt made to reduce the fractured bones without first having a good x-ray picture of the entire pelvic ring, and in that way gaining an accurate knowledge of the extent of the fracture.

Only a short time ago I was called in consultation to see a fracture of the pelvis, and the attending surgeon, without having an x-ray of the pelvic ring, and having a fracture of both the pubes and ischium, had attempted to reduce, as they thought, a dislocated head of the femur. The result was, they had turned the fractured

ischium entirely around, and it could not be returned without first cutting down, which caused the additional wounding of a great amount of important tissue.

Abnormal mobility may often be produced by steady, gentle pressure over the pubes, or by counter pressure over the ilea, and frequently in this way you may elicit crepitation. If these efforts produce pain at points not pressed upon, it is of great diagnostic value.

The presence of urine extravasated into the scrotum, perineum or over the abdomen, is also of great diagnostic value, and these conditions must be speedily relieved.

One of the best diagnostic symptoms of pelvic fracture is hemorrhage from the urethra.

In suspected fracture of the pelvis, an examination should be made with the finger in the rectum, as with the educated finger, the fractured ends of the bones may be readily detected, also the presence of blood in the rectum usually indicates that the bowel has been punctured by one of the fractured bones of the pelvis.

In treating these cases they should be handled with extreme care so as to prevent wounding of any of the viscera. They should be placed on the back on a firm mattress or fracture bed.

To lie on the back will, in the majority of instances, give these patients the greatest degree of comfort, but occasionally there will be one who is more comfortable lying on the side, and if they are, they should be allowed to assume that position.

The limbs should be drawn up and supported on pillows.

After an x-ray has revealed all the points of fracture, you may proceed to replace the bones in the proper position, as nearly as can be done with safety.

Wide strips of adhesive plaster should be applied around the hips, supplemented with roller bandages, using care to pad the bony prominences with pads of absorbent cotton, so as to prevent undue pressure.

The broad swathes with eyelets and laces may be applied in place of bandages, the object being to produce as nearly as possible immobilization of the parts.

The patient should be kept on the back for at least four weeks, and in bed for six weeks altogether.

Great care should be taken for the first four weeks to avoid any movements that might disarrange the fragments.

If the patient is delirious, an anodyne should be given to produce quiet, and if restless sandbags should be placed along the sides to prevent movements.

The bowels should be evacuated on rubber sheets, and the patient not placed on a bed-pan, as that requires some movement of the patients' pelvis.

In the cases of pelvic fracture where the urethra has been entirely severed, it is a beautiful theory for us to say—pass a sound down through the penis to the point where the urethra has been cut in two, and then cut through the perineum to the point of the sound, first locating the penial end of the urethra and then the vesical end, stitch them together with fine catgut or silk sutures, introduce a soft rubber retention catheter into the bladder, and then sew drainage into your perineal wound; but in practice it is not so easy of accomplishment.

These cases usually come to us after the other fellow has made numerous unsuccessful attempts to draw off the urine of the distressed patient by introducing a metal catheter (and not always a sterile one either) into the urethral tract, usually resulting in making one or more false passages.

When the surgeon attempts to pass the catheter or sound into the bladder, he readily follows the false passage, and when he cuts down on the end of his sound, he is easily an inch or two away from the wounded ends of the urethra, and is groping in the dark, and any attempt he may make to locate the wounded extremities of the urethra only results in failure and further wounding of the tissues.

To my mind, the only rational procedure in these cases is to make a reasonable, but gentle effort to pass a soft rubber catheter into the bladder, and if it does not pass readily, abandon that route altogether, and open the bladder suprapubically, pass your sound into the urethra from the bladder, and the instant it meets with resistance, stop, then pass a sound through the penial end of the urethra, and nineteen times out of twenty, you will feel your sounds come together with a slight metallic click. It is then an easy matter to cut down through the perineum and locate both ends of the urethra, as they are now threaded on your sounds.

There is, however, an occasional case in which the urethra is so lacerated and distorted that you are unable to find the vesical end, as I can call to mind two such cases, where I failed completely to locate the vesical end, but I passed a sound from the bladder until I met with resistance, and then a soft rubber catheter through the penial end until it met the sound, and then cut down upon them and drew the soft rubber catheter back into the bladder and retained it there, and while the ends of the urethra were not sutured together, yet I had good results in both cases.

Some authorities insist that it is better not to suture the torn ends of the urethra together, as it endangers the union of the torn ends, but I cannot bring myself to believe that it is better than to coapt and accurately suture them.

The urethra is usually lacerated by fragments of bone, or by a separation of the symphysis pubis.

One of the best diagnostic symptoms of injury of the urethra, as well as of pelvic fracture, is hemorrhage from the meatus.

Usually, when you ask these patients if they can empty the bladder, they will say, "Yes I can pass the urine but it won't come out." And when they make the effort it causes a stinging pain in the perineum which is produced by the urine extravasating into the tissues in close proximity to the wound.

It is always of the utmost importance to locate the seat of injury, and to know whether or not there is extravasation of urine into the tissues, and its exact location, for we all know what it means to leave urine extravasated through the tissues for any length of time. In a short time it begins to decompose, and a violent infection ensues, followed by high temperatures, septic poisoning and death, either of the tissues, patient or both.

Oftentimes extravasations are followed by extensive sloughs of the scrotum, perineum or abdominal muscles.

Sometimes the extravasated urine will aid us in determining the location of the lacerated urethra. When in front of the bulb, the extravasation will occur in the perineum scrotum, but when the injury occurs posterior to the bulb, the extravasation will occur in the perineum, around the rectum, and often between the abdominal muscles and peritoncum. These symptoms, however, would not be a safe guide.



In all suspected cases of injury of the urethra with extravasation, the only safe thing to do is to incise freely the perineum and the abdomen over the bladder, as the incision will not kill your patient, while an extensive extravasation will.

I want to emphasize the great importance in these cases of opening the bladder supra-pubically, for several reasons. First, it enables you to find the cut or torn ends of the urethra more certainly. Second, it tells you exactly where to make your perineal incision, and with the least wounding of the tissues. Third, it enables you to say certainly, whether or not the bladder has been torn or punctured, and if any urine has escaped, and where. Fourth, it enables you to tell whether or not any urine has extravasated into the peritoneal cavity. Fifth, after you have opened down to the bladder and stripped back the peritoneum, it enables you to replace the fractured bones easier and surer than by any other method, without the danger of injuring any important structures.

Some authorities advise replacing the fractured bones by introducing the finger into the rectum, but I have always regarded that as being a dangerous procedure, for fear of cutting a hole in the bowel by pressure against the ends of fractured bones. Unless there is eversion of the foot, or puncture of the bowel, neck or fundus of the bladder by the fractured end of a bone, think it better not to attempt any reduction of the fracture.

I have had three cases in the past two years, all of which would have been lost if I had depended on perineal drainage alone, as they all had ruptures of the bladder, and the abdominal cavity contained from two to four quarts of urine; and yet, in two of the cases I could outline the bladder as containing quite a quantity of urine.

These cases were all treated by opening the abdomen, removing the urine, flushing out the cavity with large quantities of normal salt solution, closing the holes in the bladder and putting in a cigarette drain down into the cul de sac for twenty-four hours, and placing the patient in the Fowler position. These cases all made prompt recoveries.

The presence of extravasated urine in the perineum will usually be indicated by a purplish hue of the perineum, pain on pressure, and sometimes fluctuation.

Rupture of the bladder will be attended by pain in the hypogastric regions, and a frequent desire to pass urine.

When the catheter is passed into the bladder, and only a few drops of bloody urine escape, it is pathognomonic of rupture of the bladder. To further demonstrate the existence of a rupture, without opening the bladder, the bladder should be emptied, and then a quantity of warm sterile water thrown into the bladder, and if it does not return, it is positive evidence of a ruptured bladder.

In all wounds of the urethra the torn ends should be coapted as nearly as possible, and sutured with fine silk or catgut.

The ideal method in these cases, after the torn ends have been sutured, is to pass a soft rubber retention catheter into the urethra, one or two inches beyond the wound, but not into the bladder, and retain it there for four or five days until union has taken place in the urethra and the perineal wound has healed; then the catheter can be passed entirely into the bladder, and the supra-pubic drain removed.

When a retention catheter is passed entirely into the bladder immediately after the torn ends have been sutured, there will, in the majority of instances, be some urine pass down through the urethra around the catheter, and oftentimes it will defeat your union by breaking through the perineal wound and separating the torn ends, which will retard the healing and result in stricture in some instances, and necessitate a subsequent operation for stricture.

Some surgeons claim to have equally as good results with a fixation catheter in the bladder from the beginning. If, however, that be true, I presume it is a matter of choice on the part of the surgeon.

In conclusion allow me to say, that in these cases the surgeon should never overlook his pathology, and the most important part of his pathology, in the great majority of instances, is the extravasation of urine.

#### DISCUSSION.

Dr. Kreissl, of Chicago: Dr. Mitchell has presented the subject of injuries to the urethra so perfectly and so much in detail that he has relieved me of reading a great part of my paper, as it deals with the same subject in regard to the urethra and bladder. This paper of mine is so long that I thought I would have to cut out certain phases of it, and I can see now I

can conscientiously do so with the traumatic injuries to the urethra as well. Dr. Mitchell has absolutely covered the ground.

However, I wish to say just one word in regard to drainage, of which he spoke in his last words—the differences of opinion whether we should pass a retention catheter over the sutures in the urethra or whether we should avoid that by making a counter opening somewhere in the perineum and draining from there. I am on middle ground in this matter, and I compromise. If you have a comparatively small suture of the urethra and if you are able to pass a retention catheter over the ulceration, it is well. You may safely do so without fearing to infect the wound. When you have an intensive longitudinal ulceration or laceration—there are all kinds of these extensive lacerations—and when you are able to sew up or even if you shouldn't be able to sew up this end, it is a better plan to deviate the urine as much as possible from the wound.

My procedure if there is an extensive washing of perineal tissues, as Dr. Mitchell said, is to open the bladder and drain. I pass down in front to the point of the wound and try to find the torn edges, but as everybody knows who has to deal with these conditions, you are oftentimes unsuccessful. It isn't a bad plan to make a buttonhole opening behind this suture line and place a catheter through this opening over in the bladder and drain. You needn't fear then an infection of the suture line of the urethra. However, if you choose to pass a catheter all along the urethra you may do so, too, but it necessitates firmness. There is always a seeping of urine, as Dr. Mitchell pointed out, along the catheter from the bladder into the urethra. You can avoid that if you establish constant drainage aside from the drainage through the catheter.

## OPERATION FOR CYSTOCELE BY THE ABDOMINAL ROUTE.\*

W. L. GRAY, M. D.,  
CHAMPAIGN, ILL.

I feel some timidity, in fact, almost embarrassment, in presenting this paper at this place at the present time, since hearing Dr. Watkins' paper on the same subject at the meeting of The Clinical Congress of Surgeons at Philadelphia last fall, but inasmuch as I have been using this method for some years, I thought perhaps it would be of value to those who happen to be caught in the position in which I have frequently been, and who desire to open the abdomen to fix the uterus and are at a loss to know just what

to do with the prolapse of the vagina and bladder. So I will give you the method, claiming nothing particularly original about it, but a possible combination of ideas, which meet the requirements, and you may take it for what it is worth. I have used the operation some seven or eight times and others in my particular neighborhood have also done me the courtesy of trying it, and in all cases, so far as I am able to discover, with a perfect result.

We are all very well aware that in people who pass the menopause, these prolapsed uteri, or rather cases of complete procidentia, sooner or later bring down with them the bladder and the anterior wall of the vagina, and when the uterus has gotten down as far as the pelvic floor will allow it to come, the bladder passes down in front of it and we have a condition which cannot be fixed by any method of incision in the mucous membrane that I have ever been able to find. No operation which merely shortens the mucous membrane will do the work for any length of time. The reasons are quite plain, in that the vaginal mucous membrane, instead of being more or less firmly attached to the cervix on the anterior side up for a distance of one inch or more, as is the case normally, is peeled off and is hanging like a hammock to the extreme end of the cervix, the bladder being retroflexed and lying in that bag.

My first experience in using this operation was in an individual with a complete procidentia, who did not desire a vaginal hysterectomy, although past the menopause; therefore, I pulled up the uterus and discovered that the cystocele bag still to a certain degree remained, and the only way that I could see to fix it was to sew it up. A good many surgeons have stitched up the mucous membrane or the bladder wall to the anterior wall of the uterus from the vaginal side, so it looked to me, since I had the abdomen open and could see what I was doing, why not sew it up from the inside, which was done with a very satisfactory result. Of course, one must not overlook other details of this condition, such as sewing the levator ani muscle up well to make a good pelvic floor support for the uterus in case it should sag too much from a very flabby abdomen or a possible slipping away from its attachment. The operation is quite simple and is performed as follows:

The abdomen is opened in the usual way in

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 9, 1917.



the center line, the uterus is picked up and held about at the position desired, the bladder is dissected loose from the uterus in front as though you were about to do an abdominohysterectomy, a long-handled forcep is then passed down between the bladder and the uterus, picking up the mucous membrane of the vagina on one side and drawing it up until one has decided the tension is enough, then about two inches to one side of that forcep passing down another, picking up the mucous membrane and drawing it up so as to have the two sides like the rope sides of a hammock, pulled up with a sort of a slack condition in the center in which lies the bladder. It may be necessary to dissect the bladder loose from the vaginal mucous membrane for a short distance in order to hold it up in position, then a row of sutures are passed across the mucous membrane from one force to the other, and attached to the anterior side of the uterus in a sort of a half-moon shape with a concavity upward, after which the raw surfaces, if there be any, may be covered up and the uterus firmly fixed in, and not to, the abdominal wall and the operation is complete.

An operation similar to this was published in *Surgery, Gynecology and Obstetrics* in the December number of last year by Dr. F. G. DeBose, of Selma, Alabama, which, while I have not used it, is upon the same plan except that he attaches the mucous membrane to the round ligaments instead of to the uterus, which may be just as well and possibly better, to form a hammock for the bladder to lie in.

I have not been bothered with a severe cystitis following this operation as has so frequently been the case in operations around the bladder or uterus heretofore, and which is so often the worst thing we have to contend with after gynecological operations.

The operation devised by Dr. Watkins I have had no experience with and, therefore, cannot compare it with this, but the mere fact that Dr. Watkins devised it and advises its use makes it unnecessary for me to try it myself in order to form an opinion that it is about the best one there is, so I am not recommending this operation as better or worse than anyone's else, but only submit it to you with the possible hope that it will be of use some time when nothing else seems to be available, for it certainly does restore these bladders to their normal condition and re-

lieves the symptoms, and when that is accomplished, it seems to me that that is about all that is necessary to accomplish in any operation.

## ROLE OF THE PROSTATE IN ACUTE GONORRHEAL INFECTIONS\*

BEN D. BAIRD, M. D.

GALESBURG, ILL.

Much has been said and written regarding the role of the prostate in chronic gonorrheal infections.

But until recently slight attention has been paid to it in the acute stage of the disease. That it is being recognized as a factor of more or less importance is noticeable by the more frequent recent contributions to the literature on this phase of the subject.

That it is of paramount importance, has been impressed upon the writer's mind during the last few months by the high percentage of prostatic involvements found early in his small series of cases.

One hesitates to mention numbers in the presence of G. U. specialists. However, as I lay no claim to a new discovery or treatment, it is only fair to say that of the last fifteen cases treated by me fourteen had involvement of the prostate gland; eight were of the rather firm dense type, and six were succulent and vascular but all of them were sensitive to touch, and massage gave a more or less copious supply of prostatic secretion, spermatozoa and pus at the meatal orifice; and was followed by a sense of relief to the patient.

For an understanding of why the prostate is frequently involved in acute gonorrhea, it is necessary to renew our acquaintance with the location and anatomy of the prostate and urethra, and the habits of the gonococci.

The prostate gland is an accessory sexual organ and its close relation to the urethra and its peculiar anatomical structure render it particularly susceptible to infections of the urethral tract. It surrounds the urethra at its entrance into the bladder and is composed of glandular substance and muscular tissue. The muscular tissue constitutes the stroma proper, and to-

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.

gether with the fibrous capsule supports the glandular substance in its various ramifications. The glandular substance of the prostate consists of numerous follicular pouches, opening into elongated canals which join to form from twelve to twenty small excretory ducts which open directly into the floor of the urethra (in the prostatic sinuses on either side of the verumontanum). At the forepart of the verumontanum is a depression, the sinus pocularis, about  $\frac{1}{4}$  of an inch in depth and throughout its walls are numerous openings of small glands as well as the slit like openings of the ejaculatory ducts. The sinus pocularis penetrates the prostate gland, forming an anatomical pocket and has been termed the uterus masculinus by Weber, its discoverer.

The urethra extends from the meatus to the neck of the bladder. It is about eight to nine inches in length, and except when passing urine or ejaculating semen, it is a closed slit.

These anatomical conditions make it easy for the naturally migratory gonococci, which obtain entrance through the meatus to the fossa navicularis, to travel backward by contiguity of structure through the penile and membranous portions to the prostatic urethra with its numerous openings of ducts, which lead to ramifying pockets throughout the gland and which are lined with prolongations of the urethral mucosa, which also extends into the vesiculae seminales by the way of the ejaculatory ducts.

That micro-organisms are habitually migratory is a universally accepted fact, and in the case of gonococci is frequently shown by the ascending infections of both the male and female generative tracts. It is generally conceded but it is an unproven axiom, that the infection will ordinarily confine itself to the fossa navicularis and anterior urethra, forcing its product of infection outward through the narrowest portion of the urethra, the meatus, rather than moving backward into the more easily distensible portions of the canal, especially when it is favored by a more natural habitat and assisted by gravity as it is while the patient lies abed, which is approximately one-third of the time.

Assuming that two days is an average length of time from the first tingling, itching and pouting of the meatal lips, until the appearance of the discharge at the opening; and assuming that this rate of travel would be maintained,

it would require approximately one week before the invading hosts would be due at the prostatic portion of the urethra, and storming the gates of the catacombed gland.

This period of time corresponds very closely with the writer's meager experience as I have not found its symptoms present before the eighth day of the infection.

The presence of the infection in the prostate gland is characterized by bladder frequency and a sense of heaviness and discomfort in the perineum, especially noticeable upon sitting down, and accounts for the victims of acute gonorrheal infections being unable to ride horseback or a bicycle without considerable pain, being caused by direct pressure and bumping of the saddle against the inflamed prostate and vesiculae seminales.

Gentle massage of the prostate at this time will empty the glandular structure of the products of inflammation, and will be followed with a sense of relief to the patient. Continued massage three times a week should not only prevent an extension to the epididymis, by way of the vas deferens, but will keep the glandular structure partially empty until an immunity is established assisted by daily injections of a germicidal solution and the administration of a urinary antiseptic.

This treatment, if consistently carried out should shorten the period of disability and decrease the number of cases of gonorrheal arthritis very materially. One should not discontinue the massage upon the disappearance of the gonococci, but continue it at less frequent intervals until all soreness and swelling have entirely subsided and the expressed fluid contains only prostatic secretion and spermatozoa.

The patients treated by prostatic massage from the beginning have in my hands had a more comfortable and I believe a shorter period of disability, and a greater freedom from nocturnal erections. A discussion of the involvement of the vesiculae seminales has been purposely avoided as their anatomical structure is so nearly identical with the prostate gland that we hesitate to attempt a differential diagnosis when the entire mass is swollen and tender, and the treatment is in no way different from that outlined in this paper.

#### DISCUSSION

Dr. Nagel: I can't let some of the statements made



in this paper go unchallenged, and I want to take up just a few minutes of time. There are some things in the doctor's paper that certainly want to be corrected, and I want to call his attention to the high prostatic involvement that he has when he says that he has fourteen cases of prostatic involvement out of fifteen cases of acute gonorrheal urethritis.

I wish to say to the doctor that if that is his percentage of prostatic involvement of acute gonorrheal urethritis, then it is high time that his treatment was being revised. A man who will sit back and allow one week's time to elapse for the gonococcus to spread from the meatus back into the prostate gland, and then start in and attempt to eradicate the gonococci from that system, with all the dangers attendant on such a condition—prostatic abscess, cystitis, involvement of the kidneys—with all the attendant invalidism, possible loss of life—a man who allows that high involvement certainly had better look to the revision of his treatment.

Dr. A. E. Mowry: I hate to take another moment here, but I think this is important. I've got a doctor under my care now, laid up with acute epididymitis. Another recent case was a man who had massaged his prostate and he developed a chill following an aseptic gonorrheal arthritis. I am awfully glad that Dr. Nagel made the point which he did.

Don't tinker with that prostate, because it doesn't get the results. If you have a diverticulum of the bladder and you empty that, you are simply emptying it and you are not curing it. There are possibly times with chronic cases when carefully performed massage may do some good, but don't make it a routine treatment, please. It is dangerous.

Dr. Baird: I once knew a doctor who, after reading a paper and having it leaped on like this was (and I think this is the valuable thing about any paper) and when they criticised his methods, he thanked them very cordially for agreeing with all that he had said.

Now I think my treatment of gonorrhea—of course I am not a G. U. specialist—doesn't differ from the ordinary treatment that is recognized as the proper treatment for gonorrhea.

Up until I began noticing this series of cases it had never been my habit, as it probably has not been yours, to examine the prostate unless there were some symptoms calling the patient's attention to that gland. This particular case came in on the tenth day. I hadn't seen him before. He complained of this prostatic pain, or the discomfort in the perineum. I very naturally examined the prostate and found it quite tender and after I had massaged the prostate gently he said, "By George, that feels better! I feel a lot better."

Now, then, that fellow felt better every time he came in and every time I massaged his prostate. It was followed by a sense of comfort, a sense of relief. Every case that I got after that I made it my business to examine that prostate. Every one of those fellows, with the exception of one, of those fifteen cases had exactly the same experience. Eight days was the earliest I had noticed it. Others run along from that on up to three or four weeks.

I haven't had any difficulty in any of those cases, although I may have in the future. I recognize the structure of the prostate gland, I recognize that there may be conditions where this treatment might be dangerous, but I also realize that there are a lot of cases of prostatitis, there are a lot of prostatic abscesses and cystitis that come because of the fact that the pockets in the prostate gland haven't been drained. You can only drain them in one of two ways—one by a surgical operation and the other by forcing the fluid out with your finger. I think if it is properly and carefully done the danger is very slight.

## THE PHYSICIAN AND THE PROOF OF DEATH OR DISABILITY FOR THE INSURANCE COMPANY.\*

CLIFFORD U. COLLINS, M. D.

PEORIA, ILL.

The increasing length of the blank forms for proof of death and disability furnished by the insurance companies, with the increasing amount of time taken up in filling in these blanks, led me to investigate and see if the insurance companies were not asking for more information than they were entitled to receive. For several months I have been examining insurance policies and blank forms of proof of death and disability, and have also had the legal phases of the question looked up by an attorney, in order to find out whether or not physicians were being imposed on by being asked to furnish the insurance companies more information than they were entitled to receive under their policies. The result of this investigation is my excuse for bringing this subject to your attention.

A life insurance policy is a contract between an insurance company or association and an individual in which the insured individual agrees to pay the company a certain amount of money each year, called premiums, for a number of years, and the company agrees to pay a designated beneficiary, or the insured's legal representatives, a sum of money upon the receipt of due proof of the death of the insured. All of the insurance companies or associations so far as I have been able to ascertain, specify that the proof shall be due and satisfactory and shall be presented to the head office of the company; but none of them require more than the *proof of death* in their contract.

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.

The principals of the contract are the insured and the company. The beneficiary is not a party to the contract at the time it is made, but if she elects to collect the insurance money on the death of the insured, she becomes a party to it and must comply with the terms of the contract. If she does not choose to claim the insurance money, she does not become a party to the contract and is not bound by it in any way.

The contract usually makes it clear that the beneficiary must furnish the proof of death and present it to the head office of the company, and the blank forms furnished by the company usually state that the proof must be furnished without any expense to the company.

The physician who attends the insured during his last illness was not a party to the contract at the time it was made, and never becomes a party to it. *Therefore, he is not bound in any way, nor at any time, by the terms of the contract or by the rules of the company.* Most of the companies have a sentence something like this at the top of their blank form. "This certificate **MUST** be filled in by the physician in his own handwriting." The use of the imperative mode is an outrageous piece of impertinence on the part of the companies. The insurance company has absolutely no right to say "must" to the physician. A request would be much more polite, and would much better conform to the conditions surrounding the preparation of the proof of death. Legal documents such as deeds, notes, depositions and affidavits are accepted by the courts in typewritten form if properly signed and attested, therefore the physician need not pay any attention to the peremptory command of the company, but may use his typewriter if it is more convenient and he so desires.

The physician is called upon by the beneficiary to furnish the proof of the death of the insured by reason of his position as family physician or medical attendant, and is supposed to be paid by the beneficiary for filling out the company's blank form and furnishing the proof. As the family physician and friend of the insured he is usually very willing to assist the insured's beneficiary in collecting the insurance money, and this friendliness and willingness have been taken advantage of by the insurance companies. Bearing in mind that by the terms of the contract the beneficiary is bound to furnish the proof of death only, it is rather amazing to see the questions that have

been inserted from time to time in the blank forms furnished by the companies. Many of the questions have very little, if anything, to do with the proof of death, and some of them are manifestly designed to draw out information on which to base a refusal to pay the insurance money. Think of it for a minute! The family physician and friend of the insured and beneficiary is depended upon and paid by the beneficiary for furnishing the necessary proof of death in order to collect the insurance money; and then is asked questions tending to draw out information on which to base a refusal to pay the money. It seems to me that if the company seeks such extraneous information the better way would be to ask for it directly from the physician and pay him for it, rather than to seek for it in a circumlocutory manner by asking the beneficiary to procure and pay for evidence that may result in her failure to obtain her insurance.

In talking with an attorney for an insurance company not long ago and presenting for his consideration some of the points mentioned in this paper, he made the plea that insurance companies are called on to pay, and do pay sometimes, fraudulent claims, and these long blanks are not made with the idea of adding to the burdens of physicians, but for the purpose of protecting themselves against such fraudulent claims.

Admitting this statement to be true, and I do not doubt it, I still claim that the companies should only require from the beneficiary or claimant's physician the proof required by their contract or policy, and if they desire any further information, they should negotiate for it with the physician and pay him for it and not try to obtain it surreptitiously under the guise of proof of death or disability.

Many of the questions are inserted evidently by the actuary or statistician of the company, or head clerk of the fraternal association, to gain experience and information on which to compile mortality tables. For instance, questions like the following have nothing to do with the proof of death and are evidently questions of the class mentioned above, although they may possibly be designed, also, to obtain information at variance with the insured's application or the conditions of the contract.

"Was the last illness complicated with or induced by any previous illness or infirmity?"

"Were you the deceased's medical attendant



or adviser before the last illness? If so, when and for what disease?"

"How long had the deceased complained of the symptoms of the disease causing the last illness?"

Some time ago I had a patient under my care who died of appendicitis. When the company's blank form for the proof of death was brought to me I unwittingly answered a question like the last one. I looked up my records and found that the history of attacks dated back about three years. I accordingly wrote in "three years" as the answer. As the insured had had his policy only two years and had stated in his application that he had not had appendicitis, the company made my answer a basis for a refusal to pay the insurance money. As a matter of fact, the insured had not attempted any fraud. The attacks during the first year were very mild, and had not been treated or diagnosed. The insured did not know they were attacks of appendicitis. Since then I have been very careful to give the companies just what the contract called for, the proof of death and nothing else. That is all they are entitled to from the beneficiary according to their contract.

In order to be sure that I was interpreting the terms of the contract correctly with regard to the proof of death, I had an attorney of Peoria, Mr. Ren. L. Thurman, prepare a brief covering decisions on the subject by the Supreme Courts of the various states, which follows:

The insurance policy, as has been previously stated, is an agreement between the company and the assured and neither party thereto is bound by any terms or conditions not expressly stated in the policy. Practically all insurance companies, with the exception of some assessment companies, simply, state that "due proof of death" or "satisfactory proof of death" be furnished by the beneficiaries, in no way specifying in what manner or by whom such proof shall be made.

The courts have construed these policies or contracts very strictly, and where there are any ambiguous terms or conditions they are always interpreted in favor of the beneficiary, for the reason that the insurance companies formulate these contracts and it is not to be believed that they would insert any conditions or terms that would be detrimental to them or leave out anything that would be beneficial; therefore, the courts of law have repeatedly held that these companies cannot ask more than facts establishing the death of the assured and may be confined to those facts alone.

We find in a standard legal publication, the *Cyclopedia of Law and Procedure*, in Volume 25, page 884, the following: "The requirement as to proof of

death does not necessitate direct evidence, but only such proof or showing as ought to be satisfactory. The particulars as to immaterial matters or even the cause of death, where that is immaterial, need not be given."

If the insured does not, in this policy, contract to furnish a physician's certificate, and you will find that in the ordinary policies there are no such stipulations, the company has no legal right to demand the same, as was decided in the case of *Taylor vs. Aetna Life Insurance Company*, cited in 13 Gray (a Massachusetts case), at page 434, which states as follows: "Physician's certificate of the death is not an essential part of the proof of death unless expressly required by the policy or by the usage of the company made known to the plaintiff before he took the policy," and further, in the case of *Sun Accident Association vs. Mattie Olson*, cited in 59 Ill. Appellate Reports, page 217, the court says: "Where the policy was conditional that the loss was to be paid within ninety days after sufficient proof of death and cause of the same and the blank proofs furnished by the company contained a blank certificate to be filled out by the attending physician, which said physician refused to sign, that the contract did not require the beneficiary, under the policy, to furnish the certificate of the attending physician, but referred to the kind of proof required," and a further proposition was laid down by the Indiana Appellate Court in the case of the *Life Assurance Company of America vs. Haughton et al.*, cited in 67 Northeastern, at page 950, that "the proof of the cause of death was not a condition precedent to the payment of the policy." In this case a life policy provided that the insurer would pay the insurance "immediately upon receipt of and approval of proof of the death or cause of death." It also stipulated that "the proof of death" should be furnished the insurer at its home office, within one year after the death of the assured, and should comply with the insurers' forms, the policy covering death from any cause. The court goes on to say "that the policy nowhere limits the liability of the company on account of death, for any specific cause, but by its terms agrees to pay the amount specified upon the death of the assured from any cause, upon proof of death. Taking the policy as a whole and construing the contract of insurance most strongly against the appellant (being the insurance company), as we must, we think that the first provision relating to proof of death and cause of death is so qualified by the latter that the inference is fair and reasonable that the parties intended as a condition of payment only that proof of death be made."

The answers to six questions by the family physician will give the company all the information necessary to prove the death of the insured. This is all the information that it should expect the beneficiary to procure and pay for from the family physician according to the terms of its contract.

1. Name of deceased in full.
2. Age at death. Residence.
3. How long have you known the deceased?
4. Place of death.
5. Date of death.
6. Cause of death.

The answer to the last question is not necessary to prove the fact of death. The company can get that information from the death certificate filed with the proper authorities, but I think most of us will be willing to aid it by answering the last question.

The answers to the above six questions signed and sworn to by the physician is all that the company is entitled to receive. Some question has arisen as to whether the insurance company should request the physician to go before a notary public and swear to the truth of the answers in his report. In all of the foregoing I have earnestly endeavored to be fair with the companies, and I am inclined to the opinion that the word "proof" in the insurance contract calls for a sworn statement in the presentation of the evidence of the insured's death. A sworn statement is an additional protection to the company against fraud and also protects the physician from the forgery of his name. I do think, however, that some companies have recently required too much when they have attached to their blank form a blank certificate to be filled by the clerk of a court of record to the effect that the notary public is really a notary public; but that does not concern the physician.

Bearing in mind that the family physician of the insured is acting voluntarily for the beneficiary, and is, presumably, paid by the beneficiary, it will be seen at once how incompetent, immaterial, and irrelevant are the answers to the following questions, which are all taken from the blank proofs of death furnished by insurance companies.

How long have you been his medical adviser?

Was he married or single?

Occupation at time of death.

Date of your first visit or prescription.

Date of your last visit.

Duration of the disease from the date of the first appearance of symptoms to the date of death, according to the history given to you.

Was deceased attended by any other physician during last illness? If so, state his name and address.

Was his health impaired by intemperance or any pernicious habit?

Was his death caused, directly or indirectly, by intemperance or any pernicious habit?

When and where did you receive your medical diploma?

How long have you practiced as a physician?

When did his health first become impaired?

Was his last illness complicated with or induced by any previous illness or infirmity? If so, state what and when.

Were you deceased's medical attendant or adviser before last illness? If so, when and for what disease?

Had deceased been attended or prescribed for by any other physician within the last two years preceding death? If so, when, by whom and for what disease or infirmity?

Have you ever heard of deceased being an inmate of, or prescribed for at any hospital, dispensary or public institution? If so, when and where?

Was death caused in any way by the habits or occupation of the deceased?

In regard to health and accident insurance the companies insure the individual taking out a policy against disability from illness or accident. Therefore, all they are entitled to receive from the claimant's physician is proof of disability. A very short blank like the following will give all the information required by the policy.

1. Name of claimant.

2. Age. Residence.

3. Cause of disability.

4. Duration of total disability (giving dates).

5. Duration of partial disability (giving dates).

The company is not entitled to receive from the claimant's physician, and paid for by the claimant, the information which is furnished by the answers to the following questions:

How long have you been his personal medical attendant or adviser?

For what disease, if any, did you treat or advise him prior to his injury?

Give date, duration and result of each treatment.

Was there any special cause, directly or indirectly, for the injury in habits or occupation?

Does he use alcoholic beverages or narcotics of any kind habitually?

Had he used stimulants of any character within twenty-four hours preceding this injury?

Was the injury for which he claims benefit caused directly or indirectly, in whole or in part by his drunken or immoral conduct, or as a result of his own wilful act, or the violation or attempted violation of any of the laws of the country or by reason of any disease, condition or injury existing at time of becoming a member of the order, which in whole or in part was the cause thereof?



I know that his disability was solely because of his having ..... (name of disease) of which he presented the following symptoms and clinical evidence.

I certify that the claimant, above named, is perfectly healthy and not the subject of chronic, recurrent or other ailment which could in any way have prolonged or complicated this disability, except.....

I also, certify that the sickness was not due to or complicated by any unnecessary exposure or contagion or infection, nor to any disease, directly or indirectly the result of injuries or surgical operations, except .....

Have you ever previously treated claimant for sickness of the nature for which he now makes claim?

*What was your treatment in this disease?*

In the foregoing I have endeavored to show that the usual blank forms furnished by the insurance companies for the physician are needlessly long and contain many questions that are irrelevant to the contract between the beneficiary and claimant and the insurance company. While the physician cannot be legally compelled to answer a single question, he is morally bound by his relation as family physician to the insured and beneficiary to furnish the proof of death or disability, and he is naturally desirous, any way, to assist his friends and patients to procure their insurance money. It is this natural desire that has caused physicians to submit to the ordeal of filling out these needlessly long blanks, containing so many immaterial questions, in their own handwriting. Physicians have also become accustomed to filling out blanks for the state such as birth and death certificates, and so they have submitted without much complaint to the gradually lengthening blanks furnished by the insurance companies. In the opinion of the writer it is time for physicians to refuse to furnish so much information, with the corresponding outlay of time and trouble, to the insurance companies *at no expense to the companies*.

What is the remedy? Simply give the companies the information to which they are entitled under their contract, and refuse to answer all other questions. A few years ago I adopted this plan. I expected a strong protest from the companies. To my great surprise not one blank has ever been returned. I have become convinced that the insurance companies know that they are not entitled to answers to the irrelevant questions that do not bear directly on the proof of death or disability. A very few agents have threatened to

go to my patients and tell them that my refusal to answer the immaterial questions was holding up their insurance. I have then threatened in return to go to my patients and tell them that the agent sought to make me answer questions that had nothing to do with the proof of death or disability, but were designed to bring out evidence that they might use to invalidate the insurance. That generally settled the agents.

I have furthermore told beneficiaries and claimants, whenever it seemed necessary, that I was ready to furnish an attorney to bring suit against the company for the insurance in case the company refused payment on the ground that these irrelevant questions were not answered. But I have never yet had a head office return one of these blanks to me. The nearest I came to having that experience was a few months ago. I refused to answer the question as to whether the insured indulged in the use of alcohol or narcotics. I considered it was the duty of the company to find that out at the time he took out his policy; and whether he did or not, had nothing to do with the proof of death required from the beneficiary under the policy. The company had no legal or moral right to demand that kind of evidence from me. So I answered the question as follows: "The answer to this question is incompetent, immaterial, and irrelevant." The head clerk of the fraternal association wrote me that I might know something about my profession, but I knew nothing about law, and that insurance would not be paid until I had answered that question. I wrote in answer that I would engage an attorney to start suit at once, provided he would refuse payment on the ground that I had not answered that question, and on that ground only. He did not take up the proposition.

So I am convinced that the companies know that they have inserted questions in their blank proofs of death and disability which are irrelevant and to which they are not entitled to an answer from the physician of the beneficiary or claimant under their contract.

I met a physician a few months ago who told me that he had had printed a blank form of his own which, when properly filled, contained all the information necessary to prove the death of the insured. It was very short and complete, and required very little time to properly fill. He had not had one returned.

If all physicians answer only those questions that bear directly on the proof of loss or disability, using a typewriter if they desire, and ignore the other irrelevant questions, they will save themselves a great deal of time and labor and probably cause the companies to materially shorten their blank forms.

#### DISCUSSION.

Dr. Munson suggests that this matter come before the Resolutions Committee of the State Medical Society, that some real steps may be taken so that this Society may protect itself or at least know its rights as the doctor has set them forth.

Referring to disability claim blanks, he advised keeping a record of the first blank that you fill out lest when you fill out the final blank you will have some errors whereby it may invalidate the claim of your patient.

Dr. Simpson, of Palmer, thought the proposition of insurance is just a gambler's proposition, and described a patient with walking typhoid fever, who could not collect a penny of insurance because he wasn't confined to the house. He never did fill out one of those proofs of death except in a spirit of resentment.

The Secretary: I think it has been my experience that the length of the blank has been proportionate to the goodness of the insurance company. Some of the leading insurance companies have their blanks down so that they ask very few unnecessary questions, and that is true both of the life insurance and the accident, but fraternal companies especially have a blank that has almost no end to questions. I saw one the other day in which even after getting statements from the physician and the undertaker and the mutual friends, they had to have a statement from the minister of the insured before it was complete.

Dr. Sala: In order not to have the paper go by the wayside, I would move you that it be referred or reported in the A. M. A. and that Dr. Collins be appointed a committee of one to bring it before the Resolutions Committee of the Illinois State Medical Society for some definite action.

Seconded.

Dr. Clark: Mr. Chairman, the Resolutions Committee of the Illinois State Medical Society have already reported for this year and been acted upon by the House of Delegates, but if Dr. Collins will get those resolutions in shape for next year, it can be acted upon then, and if they had been handed in this morning by nine o'clock it would have been acted upon by the Resolutions Committee this year.

In regard to these insurance blanks, if any of you have never run against one sent out by the Illinois Commercial Men's Association, you don't know anything about blanks. They have a preliminary one as long as that curtain and a secondary one, and they ask you as many questions about yourself as about the patient, and if there is anything under heaven

that any body ever thought of that they left out of that blank, I don't know what it is. They want to know the treatment; I write "orthodox" and it goes through and doesn't come back.

Dr. Sala's motion is seconded and carried.

The Chairman: It will be referred to the proper committee. Dr. Collins will close the discussion.

Dr. Collins: I don't care to say anything further.

#### CESAREAN SECTION.\*

H. M. ORR, M. D.

LA SALLE, ILL.

Like many other operations that are performed on the human, that of abdominal section for the delivery of the unborn child, which necessitates delivery through this route by disease or anatomical deformity, to be classed as a Cesarean Section is a misnomer.

The records of this operation reach back to the ancients. History states that it was compulsory to remove the unborn child from the mother at the time or immediately after death by most of the people of Asia.

The impression had gone forth that Caesar made his entrance by this manner; which Caesar, history does not mention. Of the greatest of all Caesars, Julius, no mention is made of this character of operation. The family of Caesar was prominent in Rome, before the birth of Julius Caesar, so therefore, it is possible that some of the Caesars may have made their entry into the world by this means.

After the advent of the Christian Era, the practice of medicine and surgery descended to such a low mark through fear and religious superstition and the class of individuals who were entrusted with the care of the sick and injured, were of such a character, making an operation of this kind out of the question. The alibi used that covered a multitude of sins of omission was the excuse that, anything out of the ordinary beyond their comprehension and understanding was the will of God that made it so. This condition existed through centuries even to so late a date as the delivery of the unborn by the use of forceps.

Simpson, whose reasoning and deep thought conceived the idea of delivering children by this means, met opposition, as the operation with the

\*Read before the Sixty-seventh Annual Meeting of the Illinois State Medical Society, Bloomington, May 9, 1917.



use of instruments was classed as a sacrilege and it was the belief in those fairly modern times, this was a direct interference with the will of God. The same reason compelled Lister to go to France, for the purpose of experimenting in the use of animal ligatures as a buried suture. With the advent of a broader view and less religious interference an attempt was made where an anatomical condition existed, making it impossible to deliver the child in any other way, to do so by this means.

During the time of Ambrose Paré, his attempts were fraught with disaster to the mother, owing to the fact, it was believed at that time, the use of ligatures to close the uterine wall was impossible. It was believed the contractions would prohibit this procedure. Infection was the cause of a high mortality and owing to the belief of the inability of the closure of the uterine incision, which was followed by hemorrhage, together with infection, this operation was abandoned until the time of Porro, who in 1876 attempted a delivery in this way, to overcome the hemorrhage and infection. He performed a hysterectomy with delivery and fastened the stump of the uterus in the wound. This operation was objectionable, for the reason that it produced sterility afterwards.

Sanger, of Leipsic, made the first attempt in 1882, to close the incision in the uterus with multiple sutures, previous to the closure of the abdominal wound. This really was the beginning of the success of this operation and from then on it took its place in surgical obstetrics. Asepsis and antisepsis have developed to such an extent since that time that it can be as safely done as any ordinary abdominal operation, in a modern equipped hospital with trained assistants.

The operation of craniotomy every time I have been called upon to do it, has not only been a disagreeable task but I have always approached it with repugnancy. This feeling, together with the destruction accompanied by craniotomy and the injury incurred to the mother during its performance, have spurred me on to the attempt of delivery through abdominal incision, where I believed both mother and child could be saved with less danger and injury than in the performance of a craniotomy.

While the number of times I have been called upon to perform this operation is not large

numerically, the success has been sufficient to convince me that this operation has a rightful place in our category, and should receive more consideration and study than it has in the past.

I wish to recite our experience and give a record of the following cases, which have been operated upon by myself and colleague, Dr. W. W. Greaves, at St. Mary's Hospital since March 9, 1913, to January 24, 1917. Five cases in all.

*Case 1*—Mrs. J. W., admitted March 9, 1913; healthy appearing woman in the early stages of labor. Dr. Balenseifer, her physician, on examination found a deformity of the pelvis and had her admitted to the hospital for consultation and treatment. The examination showed, owing to a bridge of bone passing from the rami, a shortened anterior-posterior diameter of the pelvis in the neighborhood of three inches. Delivery through the normal route was impossible. Analysis of blood, urine and blood pressure were normal. After reviewing the situation I advised an abdominal section, so that we could save both mother and child. This was done, she made an uninterrupted recovery and she left the hospital three weeks later with child.

*Case 2*—Mrs. T. E., March 11, 1913; findings almost identical with case one. First stage of labor, abdominal section, recovery uninterrupted. Left hospital three weeks later with child.

*Case 3*—Mrs. W. G., entered March 27, 1914. Detail work and blood pressure showed nothing of interest. Examination revealed a previous involvement of the left hip joint, with a lessening of the contour of the pelvis. This gave evidence of being caused by rickets in the girl's infancy. It shortened the lateral diameter of the pelvis so that her child could not be delivered with instruments. The mother made an uninterrupted recovery. The child died four days after birth from some unknown cause.

*Case 4*—Mrs. D., admitted November 26, 1916. Early stage of labor, presentation transverse, left hand and forearm presenting with prolapse cord. She had been delivered in 1914, with instruments. The delivery was quite difficult on account of a pelvis of small diameter. Operation performed shortly after her arrival at the hospital. Four days afterwards she had several chills, with high temperature, which was followed by a cystitis. Cultures showed it to be Colon B. Urotropine was given in ten grain doses every four hours, a vaccine was made from the culture and given in addition with the urotropin. Recovery was delayed causing her to remain in the hospital six weeks after operation. She left with her baby at that time, in good condition.

*Case 5*—Mrs. J. C., eight and one-half months pregnant, was seen by the writer January 24, 1917, in consultation with Dr. Greaves, who had taken charge of her a few days previously. She had severe edema of the face and extremities. Body and limbs would pit almost any place on pressure. The

examination of the eyes revealed a retinitis with some areas of the retina detached. The power of vision was reduced to almost total blindness. Blood analysis showed a secondary anemia, with deficient and irregular reds, with a leucocyte increase of over 12,000. The analysis of the urine showed albumin of 6 per cent with granular and hyaline casts. The woman looked and was in a serious condition, with a doubtful prognosis. She was receiving routine treatment for her condition, consisting of a milk diet, saline and hot packs in an attempt to relieve the system of the accumulated fluid. At midnight of the 24th she had a severe uremic convulsion; a second was taking place when I reached the hospital. The edema of vagina and vulva was such, version was almost impossible; auscultation showed the child was living. An abdominal section was advised and done, shortly after my arrival at the hospital. She remained as a patient for ten weeks after the operation and was discharged. At this time the dropsical condition had disappeared. But she still showed 1 per cent albumin with casts. At the present time she is up, out and around. The vision has improved, but has not regained its normal condition.

The report of these cases, while it is small in number, shows that this operation in proper hands and under proper surroundings is not a dangerous one. It is my belief that less injury is received by the mother than a severe and difficult instrument delivery. And it should receive acknowledgment and consideration from the profession.

I hope though it will not be abused like many other operations have been, by incompetent operators, who are neither equipped in skill or surroundings to assure the mother precautions and safeguards that are her due.

#### DISCUSSION.

##### *(Abstract)*

Dr. Kelso (Bloomington) thought it strange that this operation which is not a difficult one, if done under proper conditions and by an abdominal surgeon, should be so long in winning the favor of the medical profession. Women are being mutilated and infants being sacrificed today because of antiquated obstetrical methods, pending the time when this modern, up-to-date, Cesarean method should be accepted.

But if this operation is done under septic conditions or in the presence of sepsis, whether due to faulty manipulations during an impossible delivery or whether it is due to an infection of the pelvis or the vagina, it is a very dangerous one and not to be performed without serious consideration.

He has done this operation for eclampsia, for fixation of the uterus, for deformities of the outlet, and also for pernicious vomiting late in pregnancy, but

believes that fixation of the uterus should never be done in women who expect to bear children.

Dr. Windmueller (Woodstock) thought that in this discussion as well as in the paper, the indications for this operation were not made any too clear, and he advocated it in all cases of placenta praevia and in cases of complete atresia of the vagina as well as disproportions of the pelvic outlet; also in cases of eclampsia.

He has done seven with a mortality of one, which was a case of placenta previa. In that case the child lived but the mother died soon after operation from shock.

He even advised the operation in all cases requiring application of high forceps, as he considered it safer.

Dr. Maley (Galesburg) considered that the woman who went through a cesarean section was in much better condition and made a much better recovery than the woman who went through a hard labor. His first experience resulted in a live baby and a live mother, after instruments had been applied and used for almost two hours with no success. The mother reported finally that she had had two or three previous experiences in labor where there had been craniotomy and the infant had been destroyed.

In uremic convulsions also the shock to the mother is so much less from a quick Cesarean section than from any other slow attempt to dilate and deliver the patient forcibly.

Dr. Van Hoozen sympathized keenly with the writer of the paper, having had four Cesarean sections and four high forceps cases in the past year; the indications being almost identical in each.

In the high forceps cases two of the children were born dead. They were very large, strong, splendid children; both died as the result of the use of high forceps. In two of these cases of high forceps the women had complete laceration of the perineum and although they were as carefully repaired as possible at the time, neither one of them resulted in a perfect result and both of them had to have an operation—one a couple of months afterwards and the other six months later—for perfect repair.

In all the cases of high forceps the convalescence was long and the life of the baby in the two cases where the baby was born alive, was somewhat jeopardized during the first two weeks by convulsions.

In the Cesarean sections, although the indications were well marked and the patients in all of the four cases were not as good risks in every one, the baby was born crying, no resuscitation was necessary in any of the cases and the mothers were very well able to leave the hospital at the end of two weeks. One of them stayed (because she lived out of town) a little longer than two weeks. Convalescence was complete in two weeks.

Dr. Brow (Sycamore) complimented the writer of the paper for stating emphatically the conditions under which the Cesarean section ought to be done. Some men have told us not only in this State Medical



Society but in any other medical societies that the Cesarean section should be done for placenta previa, eclampsia and under all sorts of indications.

He emphasized that a Cesarean section should not be done except for well marked indications, viz. contracted pelvis, *not* for eclampsia and *not* for placenta praevia.

In a practice of medicine and obstetrics of over forty years he had delivered over three thousand women without meeting either placenta praevia or eclampsia. While willing to admit that a Cesarean section would be preferable to very much high forceps operation, the man who can't do a high forceps operation can't do a Cesarean section and one Cesarean section means a Cesarean section every time the patient is pregnant afterwards with the probability of rupture of the uterus finally and death of the patient.

Dr. Munson warned against operating in the home. Only the best surrounding conditions should be acceptable to begin a Cesarean section.

But little anesthesia is required. He prefers ether vapor, perhaps beginning with gas.

Dr. Christy (Quincy) noted that the operation on a woman who has been in labor for four or five days after repeated attempts at forceps delivery have been made gives nearly one hundred per cent mortality due to infection and generally those cases are undertaken in country homes.

In another case and to save the patient from the misfortune of repeating the experience he performed the Porro operation, the patient making a very beautiful recovery.

Dr. Orr (closing discussion): When I received the invitation from Dr. Finch to take part in this program, I concluded that it was either to renew an acquaintance that started twenty-eight years ago or else he was scarce on material. I am glad that the discussion has been brought about by this paper—I wrote it very hurriedly and possibly haven't given it as much thought and embraced as many angles as I should have done but I am glad that it has received the attention that it has.

You have heard the discussion pro and con. I want to say here and now that any woman who is in labor is entitled to and the physician in attendance has neglected his duty unless he learns everything he can from her. He is in a position where he has time to make measurements and find anatomic deformities. He can take an hour or two hours or a day if he wants.

I am not in favor of indiscriminate removal of children by the abdominal section. I want to condemn it, and of doing a Cesarean section for placenta praevia or transverse presentation in a woman with a large vagina and a large pelvis. If I did so I would think I did that woman an injustice—put her through an unjust operation.

I want to warn the gentlemen here against hasty operations of this character.

## ONE STEP FURTHER IN THE TREATMENT OF ACIDOSIS IN CHILDREN

H. C. BLANKMEYER, M. D.,  
SPRINGFIELD, ILL.

I am prompted to say, at least in part, what follows by the assumption that the "acid intoxication," known as "acidosis," better perhaps called "acidemia," is represented by the "acetone bodies" proper.

The acetone question has gone through some remarkable phases. At first it was the carbohydrates that were looked upon as the source of acetone and it was to the abnormal intestinal decomposition of carbohydrates that the formation of acetone substances was supposed to be due. This view was soon discarded upon its being shown that acetonuria is not increased by carbohydrate food, but that on the contrary it is somewhat diminished. The acetone was then thought to be derived from proteid, and for a long time this doctrine remained unassailed, the only matter for dispute being whether all varieties of proteid were capable of furnishing acetone or whether this could only be formed by the destruction of the body proteids. What appeared to be an important confirmation of the view was attained when acetone was split off from proteid by treatment with strong acids in a test tube. But although it can not be disputed that small quantities of acetone may arise from proteids inside the organism, and although new investigations show that acetone can arise from the disintegration of lutein, this process is certainly not an extensive one and cannot play any important part in pathological acetonuria.

The amount of acetone bodies is often so large that the quantity of proteid disintegrated and measured by the nitrogen in the urine would not by a long way suffice for the formation of it, even if one made, without doubt, the false assumption that all the carbon of the disintegrated proteid was transformed into acetone bodies. Recently, that is within ten years, the doctrine that acetone bodies originate out of fatty acids has come into existence. This doctrine was at first advanced only with great caution and difference. It has now fully established itself and a revision of all the known facts about acetonuria shows that this theory is the one with which they chiefly accord. There is one other point of view that must be

considered. At first it appeared that acetone and aceto-acetic acid on the one hand and oxybutyric acid on the other had quite a different significance and perhaps also a different origin. But now all investigators have come to the conclusion that the three bodies form a simple series, of which oxybutyric acid is to be regarded as the first member and the one from which aceto-acetic acid and acetone only arise. We have no longer any justification for regarding any one of these bodies apart from the rest; we must consider them at the same time and class them under the common name of "acetone bodies."

We do not yet know which fatty acids furnish the material for the formation of these bodies. The lower fatty acids may certainly be indicated, although to the higher fatty acids a share in the process may be assigned. In the latter case, however, the part they play is limited to the extent that they are capable of being split up in the body into chains of the lower fatty acids. The immediate material from which the formation of oxybutyric acid arises appears to be either butyric or acetic acid. As this rapidly leads us into the domain of chemical hypothesis, I will say no more about it relative to that phase. For practical purposes we may distinguish three stages in the excretion of acetone bodies. They cannot, however, be very sharply marked off from one another:

*First Stage*—Only acetone in the urine. The quantity varies from the normal limit of five centigrams to five decigrams. Acetone is also given off in the expired air, often as much as, and even more, than in the urine.

*Second Stage*—Aceto-acetic acid is also present in the urine, and the latter therefore turns red upon the addition of aqueous ferric chlorid. This reaction usually occurs when the daily quantity of acetone excreted in the urine has reached four decigrams. When five decigrams is exceeded one seldom fails to find aceto-acetic acid.

*Third Stage*—Oxybutyric acid occurs in the urine in addition to acetone and aceto-acetic acid. Its presence may most always be shown when more than one gram of acetone occurs in the 24 hours urine. When the excretion of acetone bodies once exceeds these lower values the oxybutyric acid begins to predominate more and more. The acetone in the urine therefore only

gives a true measure of the whole amount of acetone bodies present when the acetonuria is slight; when it is more marked this means of measurement fails, since the curve of oxybutyric acid rises much more steeply than that of the acetone. A quite considerable portion of the acetone never reaches the urine; the substance being extremely volatile, it evaporates in the lungs from the blood and gives the characteristic odor to the breath.

It has already been mentioned that oxybutyric acid is to be regarded as the primary acetone body. Its precursors, the fatty acids, are completely used up in the normal organism. When this does not happen, the acid substances themselves appear in the blood. The normal body assumes the role of satisfying large quantities of acid and so of protecting itself from the danger which a diminution of the alkalinity of the blood and tissues would entail. If there is not enough preformed alkali at disposal this is brought about by ammonia. A large part of the ammonia which is set free by the breaking down of the proteid molecule attaches itself to the acid and is thus prevented from passing over into urea. We find, therefore, that whenever abnormal quantities of acid arise in the body the relation of urea to ammonia in the urine is altered. In the normal urine, 3 to 5 per cent of the nitrogen exists in the form of ammonia, and about 80 to 85 per cent in the form of urea. With the production of an acid intoxication this relation is altered so that 20 to 25 per cent of the nitrogen may appear as ammonia, while only 60 to 70 per cent remains over for urea. Between this extreme degree of urinary change and the normal, the possible intermediate stages actually occur. There are, it is true, other factors on which the excretion of ammonia depends, but they are of much smaller significance, and we may, therefore, justly regard the excretion of ammonia as an indication of the extent of acid present in the blood, provided that alkalies are not at the same time being administered medicinally. From the quantity of ammonia ascertained, it is allowable to come to a conclusion with regard to the approximate quantity of oxybutyric acid which is being excreted in the urine at the same time; thus:

0.5 to 1 gram of ammonia per day is normal.



2 grams of ammonia correspond roughly to the excretion of 6 grams of oxybutyric acid.

5 grams of ammonia correspond roughly to the excretion of 20 grams of oxybutyric acid.

8 grams of ammonia correspond roughly to the excretion of 6 grains of oxybutyric acid.

The neutralization of the acid by the combination of ammonia has, however, its limits. Only a certain portion of the nitrogen arising from the breaking down of proteid can be set free for disposal as ammonia. If the production of acid continues with undiminished vigor, then the abnormal amount of acid must be neutralized by the fixed alkali of the tissues. This is recognized most plainly in the case of calcium and magnesium, as first demonstrated by F. van Ackeren and confirmed by the well conceived experiments of Gerhardt and Schlessinger. This, then, should at least in great part explain the lowered alkalinity value of the blood in the cases in question, which I should like to have considered the main point. The surcharging with acid is the most important and decisive factor, with no special variety of acid indicated. In consideration of these facts, which are not disputed, I believe, the acid theory shows itself not to be sufficiently far reaching. Its limitations at once suggest that attention should be directed to the nature of the poisonous substance. For a long time it was taught that oxybutyric acid was not particularly toxic; Herter and Wilbur have proven this view incorrect. Oxybutyric acid is much more poisonous than its actual acid value would lead one to suppose. We must, therefore, ascribe at least a certain part of intoxication to the specific poisonous effect of this acid. This does not, however, explain everything. We are not yet acquainted with the entire number of chemical substances which are formed as intermediate products in the breaking down of proteids and fats in the organism and we do not know whether other poisonous substances which possess some significance may not be found amongst them. It seems to me in the light of this view we must allow that both the nature and quantity of acid formed are of equal significance and contribute an equal share in impressing their stamp on the clinical form of the eventual auto-intoxication. (Van Noorden.)

If this conception of the disease in question is the correct one it appears that our helplessness

when confronted with it, is quite inexcusable. We have all seen the fatal termination in true non-diabetic acidosis after doing everything known to us. At times it seems nothing is of benefit, regardless of our procedure. We have given infusions, subdermally, intravenously, intracranially, with equally unsuccessful results. Even the duodenal tube has not proven to be the thing. It occurred to me the fault may possibly lie in the remedy. So with a possible chance of finding an effective remedy it was my intention to titrate several alkaline saline solutions against a solution of oxybutyric acid of known strength to determine the least amount of neutralizing agent needed in a given case as indicated by the ammonia content of the urine. This seemed a simple procedure until after I had combed the United States for a small quantity of the acid. This I was unable to obtain anywhere. I then decided to use aceto-acetic acid and estimate my results in terms of acetone. Again I was disappointed in being unable to secure the reagents. This left me no alternative but to offer you the next best thing by way of the chemical reactions involved and present a theory only. The alkaline acetates could not be used on account of the resulting acetic acid. The same holds true of the alkaline citrates. I have therefore chosen among the remaining salts of an alkaline reaction the following:

Sodium bicarbonate.

Potassium bicarbonate.

Calcium hydrate.

I find chemically it would require 84 grams of sodium bicarbonate to neutralize 104 grams of oxybutyric acid. Likewise I found it will require 100 grams of potassium bicarbonate to neutralize the same amount of that acid. In a similar manner it can be shown that it will require but 37 grams of calcium hydrate to accomplish the same result. This is less than one-half the sodium bicarbonate and about one-third the amount of potassium bicarbonate needed. It is possible that the by-product of carbon dioxide in the two former reactions might explain our limited success with infusions of those salts, for this amount of carbon dioxide being generated in the blood stream cannot be anything but harmful. There is no such end-product with calcium hydrate: The most common form of calcium hydrate solution is the U. S. P. Lime Water, clear, color-

less liquid, without odor, an alkaline taste and a strong alkaline reaction. The only chemical impurity it is liable to contain is the carbonate, the solubility of which is increased in the presence of ammonium salts, which, as you know, are always present in the blood in acidosis.

Official lime water is an aqueous saturated solution containing not less than 0.14 per cent of pure calcium hydrate. One hundred millilitres of this solution will neutralize 0.39 grams of oxybutyric acid. As the concentration of aceto-acetic and oxybutyric acids seldom rises above 1.5 per cent, it would require but 0.54 grams of calcium hydrate or 387 millilitres of U. S. P. Lime Water for neutralization in an ordinary case—a quantity quite easily administered by infusion in the course of twelve hours.

By the addition of 35 per cent of cane sugar to lime the solubility of the latter is increased forty-six times. Cut this in two for lactose and we have a delightful margin to figure from. Thus a 5 per cent solution of lactose would take up 0.46 grams of calcium hydrate or about three times that of ordinary lime water. As stated before, approximately four hundred millilitres of U. S. P. Lime Water would be required in an ordinary case of acidosis and by combining 5 per cent lactose—not an objectionable feature, you will admit—we could give nearly enough at one infusion.

However, it is not necessary for us to use lime water, since the dried calcium hydrate is readily procurable on the market in a pure state. The sterile lactose solution can be made in a few minutes, to which the required amount of alkali might be added. It is quite as free from micro-organisms as the center of the container holding the sodium bicarbonate which we all use in making our infusions. It will not require the tedious passing of carbon dioxide gas through it to reduce the contaminating carbonate to the bicarbonate before giving the infusion, which remedy has not to date proven very effective.

I regret exceedingly I was unable to carry out my original experiments. I am also sorry I cannot give you any statistics, as my service at the hospital affords but few cases of acidosis. I may get some facts during the coming summer. All I can possibly do at this time is to offer you what seems a reasonable suggestion.

"LEST WE FORGET," OR DR. CRAWFORD  
W. LONG, THE FIRST ANESTHETIST.\*

CHARLES B. JOHNSON, M. D.

CHAMPAIGN, ILLINOIS.

His life was gentle, and the elements  
So mix'd in him, that Nature might stand up  
And say to all the world, *this is a man.*  
—Shakespeare.

We live in a world of forgetfulness! Not a thousand miles from here a certain surgeon, after an operation, forgot to remove a sponge from where it was no longer needed and that there were untoward results goes without the saying. One of these was a long, tedious and incomplete recovery; another was a harassing mal-practice suit.

I once knew a doctor who had for a patient a six-months-old babe and who, in prescribing for it, forgot and adapted his treatment to a two-fisted six-footer. Again there were dire results, and among these could be numbered one more innocent needlessly sacrificed; and one more mother's heart-strings ruthlessly torn.

Six centuries ago lived Theodoric, an Italian surgeon, who before operating on his patients had them inhale the fumes of powerful narcotics. A sponge was for a time left in a saturated solution of opium, henbane, Indian hemp, mandragora and other sedatives, next it was dried in the sun and finally sealed up in an air-tight container. Thus was prepared the classical "spongia somnifera," or in plain English, sleeping sponge.

When about to be used the sponge was removed from its place of keeping, boiling water was poured upon it and the fumes arising were inhaled by the patient about to undergo an operation.

Such was the medieval method of producing anesthesia, and while it was not as convenient nor as efficient as our modern method, yet it unquestionably prevented much suffering that the surgeon's knife would otherwise have inevitably caused.

Unfortunately the successors of Theodoric, like ourselves, lived in a world of forgetfulness and the sleeping sponge was first neglected and then forgotten with the result that for more than five hundred years mankind was compelled to endure the tortures of the surgeon's knife.

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society, at Bloomington, May 10, 1917.



One hundred years ago lived Sir Humphrey Davy, a world-famous chemist, a great scientist and an all-around genius. Sir Humphrey did much in the way of elucidating the nature and properties of gases and more especially that of nitrous oxide, or "laughing-gas," as it was popularly called, from its tendency to produce in some persons uncontrollable fits of laughter.

This gas he not unfrequently inhaled himself; with it temporarily relieved a severe headache and on another occasion mitigated the tortures of a badly inflamed tooth. These and similar experiences caused Davy to say: "As nitrous oxide in its extensive operations, appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place."

These pregnant words of one of the world's greatest scientists were spoken in 1799, but unfortunately they fell on deaf ears and were soon forgotten; for Sir Humphrey Davy, like Theodorick, lived in a world of forgetfulness and his most important, but unheeded utterance, was another instance of good seed falling on stony ground.

The outcome was peculiar; for instead of being utilized on the medical side nitrous oxide was exploited on the amusement side and came to be, and for nearly fifty years remained, a mere plaything; and showmen were prompt to avail themselves of it to amuse their audiences. Sixty to seventy years ago the itinerant showman was deemed a back-number who did not invite volunteers to come forward and freely inhale this agent for the delectation of the remainder of the audience. One of my earliest recollections is that of seeing men go forward and put their mouths to some kind of bag of whose nature and purpose I of course had no conception.

In a little time the inhalation of laughing gas for amusement and exhilaration passed from the hands of the showmen to that of the laity and parties given for this purpose came to be popular with young people of both sexes. Unfortunately, however, for its popular use, nitrous oxide rested under the handicap that for its preparation a special apparatus was needed.

Early in the nineteenth century it was ascertained that the inhalation of sulphuric ether produced effects not unlike those of nitrous oxide, and for popular use the latter agent was promptly replaced by the former, and gatherings, where it

was exhibited, soon came to be called "ether frolics."

While, as before noted, ether frolics were usually given under the auspices of young people, yet practically no one was barred from attendance. Consequently the preacher, the teacher, the doctor and the village squire were not infrequently present and interested spectators and oftentimes amusement-producing participants as well.

Of the medical men who for long years attended and participated in these ether frolics some must have been endowed with acute powers of observation. But however this may have been, nearly a half century ran its course before it was given to one of these to sense the anesthetic possibilities of ether.

Figuratively speaking, the sower had long been abroad in the land, but as year followed year, as decade succeeded decade, his seed all fell on stony ground. At last, however, the hour struck and some of the seed of the long-patient sower fell on good ground. This good ground was the mind of a young physician. This young physician was Dr. Crawford W. Long, who after being a careful observer and participant at sundry ether frolics, became impressed with the belief that ether could be utilized for abolishing pain during surgical operations.

A participant in some of these ether parties given in and about Jefferson was a young man by the name of James M. Venable, who had on the back of his neck two small cystic tumors that he was anxious to have removed, but dreaded the pain their excision would necessarily incur.

It was under these circumstances that young Venable consulted Dr. Long, who suggested that the patient inhale ether with the hope that the pain of the knife might thus be gotten rid of.

Accordingly on March 30, 1842, some ether was poured on a towel and when young Venable had inhaled what was deemed enough, Dr. Long excised one of the tumors and meantime the patient experienced no pain whatever. Thus was the little village of Jefferson, Georgia, put on the map; thus was March 30, 1842, made memorable in the annals of medicine; thus was a young physician of 26 made forever famous. All because at this place, at this date, Dr. Crawford W. Long for the first time in the world's history produced complete surgical anesthesia.

Two months after the first operation, namely,

on June 6, 1842, ether was again administered to Venable and the remaining cyst painlessly removed.

On September 9, 1843, Dr. Long removed three cystic tumors from the head of Mrs. Vinson. One of these was excised under ether and without pain; the remaining two *without* ether and consequently *with* the usual pain.

January 8, 1845, two fingers were amputated for a negro boy and in one of these operations no ether was given and the patient experienced much pain; in the other ether was given and the excision was painless.

In operating on the negro boy ether was withheld in one case and not in the other; and likewise ether was given to Mrs. Vinson when one of her wens was removed and not in the case of the other two, for the double purpose of convincing himself (Dr. Long), the patient and any bystanders who might be present, that ether, when properly given, abolished pain in surgical operations; and furthermore, to convince any one who might be interested that the insensibility induced was due to the ether inhaled and not to hypnotism unconsciously induced by the operator. For, be it known, that in that particular period hypnotism, mesmerism or animal magnetism, as it was variously called, was a popular vogue and by many was thought to be able to work almost miraculous things.

Indeed, under accomplished mesmerists complete insensibility had, in more than one instance, been induced, and operations painlessly performed.

Something more than two years after Dr. Long began investigating the possibility of surgical anesthesia, another young professional man became interested along the same line. This was Dr. Horace Wells of Hartford, Conn., who, having observed that a certain man after inhaling nitrous oxide, received a skin abrasion without knowing it till afterwards, conceived that this agent might be used for the painless extraction of teeth.

It so happened that Dr. Wells was in position to try out his conception on himself; for he had a badly inflamed tooth that required pulling. To put the matter to the final test, the aid of a brother dentist was secured who, after Dr. Wells had inhaled what was deemed a due amount of nitrous oxide gas, pulled the diseased tooth without inflicting pain.

With this experience on his own person, Dr. Wells at once began the use of gas in his dental practice and with such success that he later removed to Boston, where he could have a larger field for the exploitation of his newly-found panacea in tooth pulling.

Finally through the influence of friends, Dr. Wells was given an opportunity to demonstrate what he had discovered before the faculty and students of Harvard Medical College in the amphitheater of the Massachusetts General Hospital. But unfortunately, owing to the fact that his apparatus was defective, or that he gave too little of the gas, his attempted demonstration was a miserable fiasco, and as he turned to leave the amphitheater and passed out of its door, the cat-calls, hisses and derisive laughter of the heartless students followed him.

This failure so disheartened Dr. Wells that he dropped his efforts in the direction of producing painless surgery, and later still, abandoned the practice of dentistry and embarked in other business.

About this time a third young professional man came to be interested in the problem that Dr. Wells had lost heart in and given up. This was Dr. Wm. G. T. Morton, first a dental student and later a partner of Dr. Wells and later still a medical student under Dr. Chas. T. Jackson and a matriculant of Harvard Medical School.

Here a word relative to Dr. Jackson who was no ordinary man in attainments. He was a scholar and after graduating in medicine at Harvard, spent two years in Europe visiting the largest hospitals and seeing and hearing the great masters of the profession. After returning to Boston he practiced for a time, but soon accepted the chair of chemistry in Harvard and continued his studies along scientific lines, and among other things, became especially well versed in geology and mineralogy.

As said above, Dr. Morton came to be greatly interested in laughing gas and more especially in the property it possessed of abolishing pain; and, as was natural, he, from time to time, reported progress to Dr. Jackson, his preceptor, and at whose house he made his home. One day Dr. Jackson after learning of some of Dr. Morton's experience, said to him, "Try sulphuric ether." Dr. Morton was energetic, resourceful, had initiative and was moreover persistent. Consequently, a suggestion such as Dr. Jackson's was



most emphatically a case of seed falling on good ground and the chances were it would spring up and bear a hundred fold.

Fortune favored Dr. Morton, for not long after receiving Dr. Jackson's suggestion, a patient came to him with a badly diseased tooth that he wanted out, but could not bear the thought of the dental forceps. The man's name was Eben Frost, and he said to Dr. Morton, "Can't you give me something to ease the pain when you go to pull it?"

"Yes, I certainly can," replied Dr. Morton, and pouring some ether on a towel, he had the patient inhale this freely, and when fully under the influence, the tooth was extracted without the patient realizing what had been done till afterwards.

That Dr. Morton was delighted goes without the saying, but his efforts had only begun. He experimented with ether in various ways. Tried it upon a favorite dog, and one day when all alone, climbed in his dental chair, poured some ether on a towel and began inhaling it. Realizing that he was about to become unconscious, he looked at his watch and noted the time, then continued the inhalations, and after a time roused up and looking at his watch again, found that all had been oblivious for about five minutes.

It so happened that when in the previous year, Dr. Wells had his mortifying failure in the amphitheater, Dr. Morton was present and no doubt profited thereby. At any rate, he, like Dr. Wells, sought and obtained an opportunity to demonstrate the power of ether to produce surgical anesthesia.

Unlike Dr. Wells' fiasco, Dr. Morton's demonstration turned out to be a well-acted drama from first to last. The date was Oct. 16, 1842; the place the amphitheater of the Massachusetts General Hospital; the chief actors, other than Dr. Morton, Dr. John Collins Warren, Dr. J. Mason Warren, Dr. Henry J. Bigelow and Dr. George Hayward, all accomplished surgeons of large experience; the audience was a number of visiting physicians and the medical student body of Harvard University.

When the stage was set and the curtain drawn, so to speak, Dr. Morton appeared at the psychological moment and proceeded to anesthetise the patient, a man by the name of Abbott. In a few moments Dr. Morton turned to Dr. John Collins Warren and said, "Doctor, your patient is ready."

The operation was not a simple one and consisted in the removal of a tumor from under the patient's jaw where it proved to have unlooked for attachments. At the conclusion of the operation, during which the patient experienced no pain, Dr. Warren turned to the audience and said, "Gentlemen, this is no humbug."

Thus ended as dramatic a scene as ever was staged for or by the medical profession. The Massachusetts General Hospital was the largest and best equipped institution of its kind in the country; and Dr. John Collins Warren, the operator, was chief surgeon to this hospital, had an international reputation, was a nephew of Dr. Joseph Warren, who fell at Bunker Hill and hence came of one of the most noted families in American history.

Compare this environment with that of Dr. Long when four and one-half years before he performed his first operation under ether anesthesia. Performed it in the little village of Jefferson, Ga., twenty miles from a newspaper and more than a hundred miles from a railroad, a hospital, a medical journal, or a surgeon of more than local reputation. Performed it with no professional eye save his own to witness success or failure. Performed it with no professional hand other than his own to aid in case of disaster. Performed this era-making operation when but 26 years of age.

And here permit me to note a most interesting fact, namely, all three of those who in the early forties made strenuous efforts to give the world surgical anesthesia were young men. As we have seen, Long was but 26, when on March 30, 1842, he did his first painless operation under ether; Wells but 29 when on December 12, 1844, he had a diseased tooth painlessly drawn while under the influence of nitrous oxide; and finally Morton was but 27 when on October 16, 1846, he made his historic demonstration in the amphitheater of the Massachusetts General Hospital.

This is in accordance with the old adage which says, "Young men for war and old men for counsel."

In two or three months after Morton's demonstration at the Massachusetts General Hospital, operations under ether were being performed in practically the whole civilized world.

A little while before his historic demonstration, Dr. Morton patented the use of "letheon," which was really sulphuric ether disguised with

aromatics and essential oils; and Dr. Jackson, supposedly an ethical physician, was a silent partner and proposed beneficiary in this transaction.

Dr. Wells, who claimed to be the first to produce surgical anesthesia, protested when Dr. Morton patented his "letheon," not on ethical grounds, but solely because he feared it would advance Morton's interests beyond his own.

It was not long till bad blood developed between all three of the claimants for the honor of the discovery of anesthesia. Dr. Morton's successful demonstration made him by far the most prominent and consequently he and his friends in 1849 petitioned Congress for a substantial money compensation; and as this was contested by the friends of the other claimants, there was precipitated what is known as the "ether controversy."

Into the particulars of this controversy I have neither time nor inclination to enter. Let it suffice to say that it was waged with almost desperation on the part of the contestants and continued for the five years between 1849 and 1854.

In the last named year Dr. Long, yielding to the urgent solicitation of friends, wrote a letter to Senator Dawson of Georgia, showing clearly that he (Dr. Long) had made practical use of surgical anesthesia years before any one of the three New England claimants.

The entrance of a fourth contestant whose claims seemed incontestable was as bright sunshine in dispelling mist and forever ended the famous "ether controversy."

Among them all Dr. Long was the only one who did not desire money compensation, though he very naturally had a laudable ambition that what he had done might receive professional recognition.

The end of the three New England claimants was pathetic. While suffering from what seemed an attack of acute mania, Wells in 1848 ended his own life at the early age of 33. Immediately after reading a scurrilous attack on himself by one of Dr. Jackson's adherents, Dr. Morton was stricken with apoplexy and died in the prime of life in 1868. In 1873 Jackson went hopelessly insane and died seven years later at the age of 76.

In 1877, just forty years ago, I attended a meeting of the American Medical Association, held in Chicago.

There were giants in those days and among

some of these in attendance I recall our own noble Dr. N. S. Davis; Dr. S. D. Gross, the prince of American surgeons, and Dr. J. Marion Sims of New York, brainy, brilliant and aggressive. It goes without saying that I, a young physician, had eyes to see all that these and other great leaders did, and ears to hear every word that fell from their lips.

In that period the American Medical Association was not the enormous unwieldy body that it is today, consequently all the business of the meetings, and all the scientific sessions were held in one large hall where everyone could attend.

For one of the afternoon sessions I arrived early and found the hall nearly empty and in practically every seat a copy of the *Virginia Medical Monthly* for free distribution. I picked up a copy and on hastily running through the table of contents, my eye fell on an article from the pen of Dr. Sims and this fact caused me to put the journal in my pocket to be read when I had leisure. The leisure came a few days after I returned to my home; and upon reading Dr. Sims' paper, I found it to be a presentation of the claims of one Dr. Crawford W. Long of Georgia to have been the first to produce surgical anesthesia with sulphuric ether.

I had never before heard of Dr. Long and when I had finished the article I said to myself, "What, one more claimant—one more in addition to Wells, Jackson and Morton!"

The year previous, 1876, was centennial year, and the *American Journal of the Medical Sciences*, the ablest medical periodical ever published in this country and then in the very flower of its long, successful career, printed a series of contributions from leading medical men, giving a concise history of American medicine. Among these was a long article from the pen of Dr. Henry J. Bigelow, already referred to as one of the prominent surgeons of the country and as being present at Dr. Morton's dramatic demonstration at the Massachusetts General Hospital in 1845. After judiciously reviewing all the circumstances connected with the claims of Wells, Jackson and Morton, Dr. Bigelow unhesitatingly awarded the honor of discovery to Morton; and, strange to say, in the whole course of his long review of the claims of the contestants, did not so much as mention the name of Dr. Long.

Forty years ago practically every physician



who aspired to be up-to-date was a subscriber to and a careful reader of the *American Journal of Medical Sciences*, and in most instances its every word was law to those who scanned its pages. What wonder is it, then, that most of us agreed with Dr. Henry J. Bigelow when he awarded the palm to Dr. Morton. What wonder, further, is it that Dr. Sims' article, carrying with it, as it did, the weight of his great name, did not change the attitude of many north of the line of the Ohio River.

As for myself, Dr. Sims' paper, though interesting, made only a passing impression on my mind, and for more than a third of a century hereafter I never for one moment ceased to regard Dr. Morton other than the discoverer of surgical anesthesia.

About four years ago I received a copy of a bulletin issued by the University of Pennsylvania, giving an account of the unveiling of the memorial tablet in the Medical building in honor of Dr. Crawford W. Long, the first to use sulphuric ether for producing surgical anesthesia. After reading this Bulletin came the thought—"If the old, staid, conservative University of Pennsylvania officially recognizes Dr. Long's claim it certainly has some basis of fact."

With this thought in mind as I had leisure I began investigating and in due time reached the conclusion that just as certainly as Harvey discovered the circulation; just as certainly as Jenner discovered vaccination; just as certainly as Lister was the first to make practical use of surgical antiseptics; just that certainly was Dr. Long the first to make practical use of surgical anesthesia.

And now a little about Dr. Long/the individual; he was born in Danielsville, Georgia, November 1, 1815. He came of Revolutionary stock, was well bred, received a collegiate education and in 1839, at the age of 24, was graduated in medicine from the University of Pennsylvania. He then went to New York and there spent eighteen months "walking" its hospital wards. Meantime he developed an aptness for surgery and in consequence the way opened for him to enter the U. S. Naval service, but finally yielding to the desires of his father he returned to his native State and located in the little village of Jefferson, Georgia.

From the foregoing it will be seen that Dr. Long was much better fitted for the practice of

his profession from the educational standpoint, than the average practitioner. Nature had also been kind in giving him excellent judgment, a sympathetic heart, a magnetic presence and a faculty for making and keeping friends.' With it all, however, he was modest and retiring almost to timidity, though in professional work he never hesitated nor halted once the way seemed clear.

Certainly the little village of Jefferson was fortunate in securing such professional services as Dr. Long could render. It goes without saying that a physician equipped as was this young Pennsylvania alumnus was not long in making friends and winning clients.

On the social side he mingled with young people, attended ether frolics and from observation and his own experience while under the influence of sulphuric ether came to be impressed with the idea that possibly surgical operations could be painlessly performed on those who had been made insensible with this agent.

This idea, as we have already seen, was successfully tried out on young Venable and at a time when Dr. Long had been in practice but a little more than one year.

He has been criticised because he did not make more effort to bring his fortunate results in the limelight. But as elsewhere noted he was greatly handicapped by his environment, and furthermore opportunities for putting surgical anesthesia to a supreme test were necessarily few and far between in the practice of a young physician in a rural and thinly peopled community.

Such successful demonstrations as he made in addition to being without the aid of newspapers, hospitals and prominent surgeons lacked the sympathetic support of his colleagues; and most of these shrugged their shoulders and in effect, if not in fact, said, "That young dare-devil will kill somebody one of these days if he don't quit fooling with ether."

But when all things are considered these unfavorable criticisms are not to be wondered at. Three hundred years ago when Harvey demonstrated his discovery of the circulation, it is said that no medical man in England who had passed his fortieth year would accept it. Such is human nature. Sometimes over credulous and at others not credulous enough.

But while the work of Dr. Long was well

known and freely discussed in his own locality yet from one cause and another he did not publish an account of it till 1849 when a full report from his pen appeared in the *Southern Medical and Surgical Journal* of Augusta, Georgia.

Dr. Long's best friends can but regret that he so long neglected to publish his experience in surgical anesthesia, but as we have seen there were many obstacles in the way and no one has more aptly referred to these than Dr. I. H. Goss of Athens, Georgia, who said:

Considered from a present point of view, his delay seems extraordinary. But it must not be forgotten that since that period the world has moved with exceeding rapidity. Seventy-five years ago, for a young practitioner in an obscure village, far from contact with centers of thought, removed from railroads, enjoying but modest postal facilities, with no great hospital organizations to confirm his professional research; for a modest, diffident young physician to claim so startling a discovery as anesthesia has proven to be, without first proving exhaustive truth of its worth, would have brought upon him the adverse criticism of his elders and perhaps the laughter of his colleagues.

In 1851 Dr. Long removed to Athens, Georgia, some twenty miles from Jefferson his first location. At his new place of business he as heretofore and ever after, pursued the even tenor of his way, that of an ethical physician.

When the great crisis of the sixties came, Dr. Long, like his college-mate and life-long friend, Alexander H. Stevens, opposed secession, but when finally Georgia cast her lot with her sister cotton States, he went with his native Commonwealth.

During the Civil War he had charge of a Confederate hospital at Athens, Georgia, and shortly after the struggle ended he entered the U. S. medical service and attended the federal troops stationed at Athens; certainly a mark of confidence on the part of the federal authorities.

At the breaking out of the conflict Dr. Long was in comfortable circumstances but like most southerners sustained great loss. However, when all was over, by the exercise of his usual good judgment he in due time recovered his former prosperity.

As a man and citizen Dr. Long's standing was ever the highest. He was active, alert, always busy and literally died in the harness. The end came June 6, 1878, from a stroke of apo-

plexy and his last words were framed into an inquiry relative to the condition of the patient at whose bedside he had just been stricken. Thus, if I may be permitted to change the figure of speech—thus in the heat of a professional engagement, the last summons came, and he gave up his life on the firing line.

Notwithstanding the fact that surgical anesthesia is one of the world's greatest contributions to medicine, three quarters of a century's familiarity with its practical use has made it so common that in this world of forgetfulness the tendency is to forget its almost miraculous powers, for in a sense a miracle is wrought every time a patient is anesthetized.

Think of it! The nerves of sensation as dead to impressions as a stone! Consciousness to mental influences as oblivious as the grave. Yet no essential life-function suspended or impaired. The heart throbs. The pulses beat. The chest rises and falls in rhythmical respiration. Every heart stroke almost musical in rhythmical exactness. Each inspiration free, full and in due succession.

Out through the red arteries into the tiniest and remotest capillary, goes the scarlet tinted, oxygen-freighted blood cell on its life-giving mission. Back through the blue veins comes the same cell, now dark hued and purple with its burden of wasted products on its way to destruction in the furnace fires of respiration.

Thus on and on goes the ceaseless round of the life-giving and life-sustaining forces while the surgeon calm and composed goes about his work happy with the consciousness that though his patient has eyes he sees not; that though he has ears he hears not; that though he has mind he heeds not; and that though he has nerves he feels not the agonizing tortures of the knife.

As we have seen this medical marvel was first conceived; this surgical miracle was first wrought; this medical dream was first realized by Dr. Crawford W. Long at Jefferson, Georgia, on March 30, 1842, almost exactly seventy-five years ago.

And now in conclusion permit me to say that living in a world of forgetfulness as we do, let us each resolve to have a care, "Lest we forget"—"Lest we forget."

In the preparation of this paper I acknowledge myself indebted to various authorities and



among these I name Drs. John Collins Warren, Henry J. Bigelow, J. C. Rceve, Dudley W. Buxton, J. Marion Sims, Isham M. Goss, E. M. Magruder, also Joseph Jacobs, Phar. D., Miss Rosa P. Chiles and finally to two devoted daughters of Dr. Crawford W. Long, both of Athens, Georgia, Mrs. Frances Long Taypor and Mrs. Florence L. Bartow.

## AN ETIOLOGICAL STUDY OF ACUTE ARTHRITIS.\*

WARREN R. RAINEY, M. D.

Orthopedic Department Washington University

EAST ST. LOUIS, ILL.

In going over a large series of joint infections, that have been carefully compiled in the record room of a hospital, it is interesting to note the relation that exists between the joint infections and other acute and sub-acute pathological conditions. The most outstanding type is that existing between tonsils and joints. Second, that existing between prostatic, urethral and joint conditions. And third, those joint conditions that are related to a pyorrhea alveolaris, or at any rate where the two conditions exist together.

There are other smaller series that represent the pneumococcus joints, one of the most virulent forms that usually develop in the latter stages of the pneumonias, and directly following a crisis. Again, a much smaller group secondary to typhoid fever, particularly located about the spine. Then a much less frequent type that develops during the progress of the contagious diseases, scarlet fever for example.

There is still another type of a joint that I believe will be found in increasing numbers as the Wassermann test is better understood and more regularly used. There have been several cases come to notice in the out-patient department of Washington University having all the earmarks of an acute arthritis.

One was an ankle case, one, a knee, and the other in the tarso-meta-tarsal joint. The last named case was seen in the clinic within twenty-four hours after the first development of symptoms. He was a negro, a teamster by occupation, and gave no history of injury but the day

before had been at his regular employment. The foot began swelling during the course of the night and the following morning he presented himself at our clinic. The foot was swollen, red, and painful, and the temperature of the foot was increased. His temperature by mouth was 100. Ice bags were applied and the foot was put at rest. After a period of four days, the patient returned to the clinic only slightly relieved. A Wassermann test that was taken at his first visit had proved positive and he was accordingly put on a mercurial treatment. The response to this medication was very prompt and gratifying and after a short period of time he was relieved of pain and was able to walk without a limp. The clinic has kept in touch with this man and his condition still remains good, though he still follows his mercurial treatment.

The ankle case was an arthritis with much thickening about the joint. He was a man forty-five years of age, apparently in the best of health, with two healthy sons, no miscarriages in the family, and denying all venereal history. He wrenched his foot while playing tennis, and this was followed by swelling and tenderness which he treated as a sprain. Not getting relief within a reasonable length of time, he applied to the clinic where the joint was found to be still swollen and tender. Strapping was used to mobilize and reduce the swelling, but without results. This was followed by baking and massage, still without relief. A Wassermann test was then made which proved to be positive and the joint condition was greatly improved from the subsequent mercurial treatment.

The knee case before mentioned was one in which the onset was very insidious. The first symptom was a slight pain on walking that produced a limp, and the second, swelling of the joint both by thickening of the joint capsule, and accumulation of fluid within the joint, and later a crepitation and condition resembling a typical villous arthritis. The Wassermann in this case was a four plus positive and the joint has gradually been improving under a mercurial treatment. At the present there is no extra accumulation of joint fluid and he is able to walk on the leg without pain. There is still crepitation present although not so marked as four months ago.

In the foregoing cases of joint syphilis our

\*Prepared for the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 10, 1917.

attention is particularly called to the fact that we have a marked resemblance between the symptoms of these cases and the acute arthritides met with following tonsillar infections, traumatic injuries to joints, and the so-called rheumatic joint. I might state at this point that the particular object of this paper, is to bring to your attention the great importance of treating joint cases from the standpoint of their etiology. In carrying out this idea, a routine Wassermann test should be made on all cases of joint infections.

No doubt, some of the early failures in joint operations can be attributed to the fact that the operators were unknowingly dealing with syphilitic joints.

Our list presents a large number of cases of acute infectious arthritis in which the secondary diagnosis is acute or chronic prostatitis, acute or chronic urethritis, or seminal vesiculitis. The distribution of this infection runs much the same as that given in the three hundred and seventy-five cases collected by Finger, and, as he states, about forty per cent. of them are non-articular.

There is one symptom in particular that I have not noted in text books, but it has been called to my attention in taking the clinical history. It is that before the definite localization of the pain, there is aching in several other joints first, and finally, the one to be affected is attracted. This symptom group may not hold true in every case of gonorrheal arthritis but is interesting inasmuch as it has been noted in several cases.

The treatment of the gonorrheal condition has not always been accompanied by brilliant results, and particularly in acute cases improvement in the affected joint is not always noted. In the more chronic types, following the usual massage of the prostate, and the instillation of the posterior urethra, the improvement can be noted daily. The cases in which the improvement has been most marked, are those where a vasotomy has been performed and the vas injected with a twenty to twenty-five per cent. argyrol. There are two cases in particular that come under this grouping. Both of them are knee cases, occurring during the exacerbation of chronic gonorrhea. They both had the usual symptoms, of temperature and swelling about the joint. They were under treatment for sev-

eral weeks by the usual medical treatments without improvement in either case. Within forty-eight hours following the vasotomy, both cases showed decided betterment, not only in their temperature curve, but also in the joint itself. The inflammation subsided and the pain gradually ceased. Another case occurring in this series, on which a diagnosis of Neisserian arthritis had been made and on which a vasotomy had been performed, and the regular prostatic massage had been carried out, did not recover or show any improvement. A Wassermann was made and a four-plus positive was found to be present. The mercurial treatment was started and the case began to show immediate signs of recovery. Here again, we have proof of the absolute value in a correct etiological diagnosis.

There are a great many cases of osteoarthritis of the spine in which there seem to be an interrelation existing between the painful back and the chronic prostatitis. When these cases are under the care of a genito-urinary specialist, who thoroughly understands prostatic massage, they show improvement, but when they get lax in their treatment, the improvement ceases. This is quite conclusive evidence that the prostate and its related vesicles are the beds of infection for the gonococcus germ.

It now depends upon the skill of our genito-urinary specialist to devise some ways or means to eradicate the germ from this special field. They have already taken a step in the right direction in the drainage of the seminal vesicle and the vasotomy, and it only remains for them to work out further means of sterilizing the genito-urinary tract in order to make their cures more perfect. I believe that we can account for the fact that in the past we have had such a relatively small per cent. of cures in chronic joints in which we knew that the gonococcus is the cause, by the fact that our system of attack has not been far-reaching enough in locating the full extent of the disease.

By far the largest number of cases in which an attempt has been made to work out the diagnosis on an etiologic basis are those in which the infection is in the mouth and throat. Possibly too much stress has been laid on pyorrhea as a cause of joint infection and chronic articular rheumatism, but nevertheless, pyorrhea is found in an aggravated condition in a great many of these cases, and a large number of improvements



and cures have been effected through a thorough cleansing of the teeth. Here, again, we find cases in which the teeth have been pulled, and the gums treated, and still deep foci of infection around the base of the root are located by the x-ray that have never received any treatment at all. We should not be too ready to condemn the supporters of this theory of teeth infections, until we have satisfied ourselves that we have exhausted all means of locating hidden mouth infections.

The nose and nasal sinuses are now coming into vogue as feeders of joint infections. There has not been very much written upon this subject as compared to the tonsillar and alveolar infections, but our nose and throat men are gradually laying more stress on accessory sinus troubles, so why not these as sources of infection to our joints?

The great group of arthritides associated with pathologic tonsils stands out foremost in this classification. Nearly seventy-five per cent. of the cases of acute arthritis are those directly following acute tonsillar infections. Many cases of chronic articular rheumatism show periods of relapse or exacerbation just after attacks of tonsillitis. As the diseased tonsil takes on redness, the joint becomes painful and swollen, almost acting as a barometer to the degree of tonsillar infection and absorption. As to the types of tonsils, most stress has been laid on the large, hypertrophied type, and the flat or buried tonsil has been passed up as a harmless organ. Since a study has been made of these tonsils relative to their bacteria flora, it has been found that the most innocent looking tonsil has harbored the most virulent strains of bacteria. Our work so far in the enucleation of the tonsil has been very elementary. We are just beginning to realize the full value of the complete removal of the tonsil because with an infected crypt, running deep into the base of the tonsil, we still have a focus of infection remaining in the throat. Another advancement along the line of tonsillar infections, relative to joints, is a culture of the enucleated tonsil. To carry on this work, the tonsil should be removed aseptically, and emulsified under sterile precautions. The emulsion is then cultured according to the Rosenau method, and the colonies of bacteria isolated and grown. From these various strains, vaccines should be made and the patient inoculated. The bacteri-

ological examination so far made has shown a preponderance of staphylococcus, pneumococcus, and streptococcus. There have been a few cases of streptococcus viridans, and a few diphtheroid bacilli. It is in a relatively small per cent. that a bacterium is isolated from the joint infected that corresponds with the germ found in the tonsil. Also, there are few positive blood cultures showing the same as in the focus of infection.

Theoretically, there should be found microorganisms within the joint fluid or in the tissues lining the joint cavity. Also, at the time of infection, there should be a strain of the bacteria in the blood. We cannot accept the theory that the joint destruction is due to toxins alone, with the focus of infection at some distant part of the body, but the reasonable assumption is that the bacteria themselves have been able to invade the blood stream and have localized by selection or accident the particular joint involved. Our few positive cultures from about the infected joint, encourage us to persist in attempting to isolate the etiologic cause of the disease in the blood stream or about the infected joint. The most gratifying cures have been in cases where we have demonstrated a hidden focus of an infected tonsil, following the removal of the tonsil, and a course of vaccines has rapidly cleared up the case. In our enthusiasm we are liable to give too much credit to the simple removal of the tonsil, and then condemn the procedure when we do not get immediate results. In a great many of these cases if the truth were known, the tonsil never was primarily at fault. The infection may have been located in the middle ear, as was found in one of the cases in our series, in which a knee was involved and in which there was no recovery until after the infection of the ear had been cleared up. It is also possible that there are secondary sources of infection that are being overlooked following the removal of the primary cause, as in our work on the prostate and the seminal vesicles. We originally devoted all of our time to prostatic massage, and intra-urethral medication, where now we are attacking the accessory ducts and reservoirs.

There is another possible etiologic cause of which we have very little knowledge. It is that played by the intestinal flora. Since the streptococcus has been isolated in the duodenal ulcer, it has given us a clue that possibly from the

bowel contents there are developed strains of bacteria that permeate the bowel and invade the body structures. There is no one who had laid as great stress on this theory as Sir Arbuthnot Lane of London. He has repeatedly, both in paper and clinic, demonstrated to us the interrelation existing between chronic constipation, and articular rheumatism. He has not only short-circuited the large intestine, but has removed it entirely in order to affect cures for intestinal stasis. It had been known to all of us in our treatment of chronic joint conditions, or rheumatic arthritis, that constipation is always a sign or forewarning of increased joint pains. We have no statistics covering this field, although we have some cases of acute joints following attacks of cholecystitis and acute appendicitis, but for joints involved following intestinal disturbances we know comparatively little or nothing. It is a clinical fact noted that patients who are suffering from chronic multiple arthritis will tell you that they get relief from pain by eating lemons or grape fruit. As to whether this has any bearing on the bacterial activity of the bowel contents is merely a matter of speculation. We know that one-half the success of the various cures for rheumatism about the country is due to their rigid dietetics and the laxatives that are prescribed. It behooves us as physicians to work out a method of studying the bacterial contents of the intestine and attempt to find a cause for a large number of these unfortunate cases in this field.

In conclusion, let me reiterate that the basis of this paper is to point out the great importance of studying the acute and chronic joint cases from a standpoint of their etiology. Let a careful history be written on every case, subject everyone to a Wassermann test; where the joint contains fluid, aspirate and examine by culture, by stain, by differential white count and animal inoculation. Never neglect the culture from the blood, with the complete blood examination. Elicit the careful history of genito-urinary conditions. Send the patient to a competent dentist, and check up on the findings about the nose and throat. With all this information assembled, by a process of elimination, one can find the possible source of infection and take immediate steps for its eradication.

## THE DOCTOR AND THE EMERGENCY

Our government is still calling for available men to serve as medical officers of the army. The selective draft has been made and more than a million men have been called. The vast machinery has been set in motion to select a national army of 687,000 men, out of those whose numbers were drawn. For the next few weeks the exemption boards will be kept very busy in making the selections.

To properly equip the armies of the United States will require 20,000 doctors and a call has been made to secure the services of competent medical men. Up to this time the efforts of the government have not met with the expected success and it may become necessary to resort to conscription to secure the required number.

To the credit of our country be it said that our men have responded nobly. About fifty per cent of the available doctors of our country have made application to become members of the Medical Officers Reserve Corps and there are others who intend to submit their applications.

Our duty in the present emergency is plain. We must sustain our President and be obedient to the call of our country. It makes no difference now who started the war. It makes no difference whether we think that our country should have been kept out of the horrible maelstrom. Ever since our President declared that a state of war existed, it has become our duty to drop all of our private views and wishes and join heartily in the defense of our country.

This, of course, will require a great sacrifice. Many a man who has spent weary years in the up-building of his practice and who now has secured a position of financial success, will be very loath to see all this hard work come to naught, his practice scattered with no assurance that it will ever come back. His heart strings will be torn when he thinks of leaving his wife and family, his home, the dearest spot on earth to him. When he realizes that the end of it all may be some unmarked spot, back of the trenches, "somewhere in France," it is enough to make the stoutest heart quail. However, the call of his country has come and has found a responding chord in his own heart. He knows that he is only one of many millions who is called upon for self sacrifice. He realizes that the man on the firing line is his brother and that the mother, who was called upon to give up her only son, is his sister. He knows that he is master of a God-given talent that will save many a precious life and limb and reduce pain and suffering to a minimum.

Thus fortified he will go forth with a stout heart and a firm reliance on the future. He goes at his country's call, answering the cry of humanity, which in the heart of a true physician is always, under any circumstance, greater than every other consideration.  
—From *The Madison County Doctor*.

Civilian health is the rock upon which military efficiency rests.

Swimming is a healthful exercise.



## ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society, under the direction of the Publication Committee of the Council.

### GENERAL OFFICERS, 1917-18

PRESIDENT.....E. B. COOLLEY, Danville  
 PRESIDENT-ELECT.....E. W. FIEGENBAUM, Edwardsville  
 FIRST VICE-PRESIDENT.....E. P. SLOAN, Bloomington  
 SECOND VICE-PRESIDENT.....SADIE BAY ADAIR, Chicago  
 TREASURER.....A. J. MARKLEY, Belvidere  
 SECRETARY.....W. H. GILMORE, Mt. Vernon  
 (Ex-officio Clerk of the Council)

### THE COUNCIL

District 1—EMIL WINDMUELLER, Woodstock.  
 District 2—EDWIN S. GILLESPIE, Wenona.  
 District 3—CLYDE D. PENCE, Chicago.  
 District 4—AUGUST H. ARP, Moline.  
 District 5—C. S. NELSON, Springfield.  
 District 6—C. D. CENTER, Quincy.  
 District 7—C. F. BURKHARDT, Effingham.  
 District 8—C. E. PRICE, Robinson.  
 District 9—FRANK C. SIBLEY, Carmi.  
 CLYDE D. PENCE, *Chairman*, 8338 Ogden Avenue.

Send original articles and all communications relating to advertisements and mailing list to Dr. Clyde D. Pence, Editor, 8338 Ogden Avenue.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items to Dr. Henry G. Ohls, *Managing Editor*, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

### MEDICO-LEGAL COMMITTEE

ANDY HALL.....Mt. Vernon  
 WILLIAM O. KROHN.....Chicago  
 GEORGE STACY.....Jacksonville  
 D. R. MACMARTIN.....Chicago  
 C. B. KING, *Chairman*.....8938 Jackson Blvd., Chicago  
 THOMAS D. CANTRELL, *Secretary*.....Bloomington

### GENERAL COUNSEL

ROBERT J. FOLONIE.....39 S. La Salle Street, Chicago

State society will pay no bills for legal services except those contracted by the committee. Notify the Chairman at once. Don't employ attorneys.

AUGUST, 1917

## Editorials

### THE ALIEN AND THE DRAFT.

In many districts in the large cities with a large alien population the exemption boards predict that there will be difficulty in securing the required quota, or if secured it will take practically all the citizens and leave the aliens to secure the business of the patriots while the latter are serving at the front. Prompt passage of the bills now before the congress to correct this condition may equalize the burden in subsequent calls, but it cannot cure the present injustice.

Under the present law it seems that the quota required was based on the Census estimate of population which did not exclude the aliens. After the registration, which indicated that the former Census estimates were far from correct, the Bureau of the Census issued "revised" estimates of population apparently based on the registration itself. Thus in Chicago the former

estimate of the men between twenty-one and thirty-one years of age was 300,800. The actual registration was 314,116, an increase of 4.4 per cent. But the official census estimate of Chicago's midyear population was 2,547,201, which for the purpose of the draft was raised to 3,639,957, an increase of 42.9 per cent. Just why there should be such a discrepancy no one seems to know.

### BEG YOUR PARDON!

In the article on "Military Exemption Board" in the July JOURNAL we failed to mention the name of Dr. P. M. Burke as a member of the LaSalle County, No. 2 Board. This was an oversight. This board is the only one in the State, as far as we are informed that had two physician members.

### CENSUS BUREAU WANTS ACCURATE STATEMENTS

More accurate and definite statements of the occupations of decedents should be written upon death certificates. Until this is done mortality statistics by occupations will continue to be unsatisfactory.

The Bureau of the Census is planning for the near future a monograph on tuberculosis. How much more valuable this monograph will be if it is possible to show accurately the occupations of decedents.

As a physician you appreciate the importance of such statistics. As a physician you are by education better qualified than the ordinary informant to understand a proper statement of occupation.

Will you not, therefore, take pains to see that the occupation items upon each one of your death certificates are properly supplied?

### TRI-STATE DISTRICT MEDICAL SOCIETY

The Tri-State District Medical Society extends a hearty invitation to the doctors of Illinois to be present at its annual scientific and clinical meeting to be held at Dubuque, Iowa, September 4, 5, 6. The doctor's wives and ladies are also cordially invited to be present.

Dubuque is providing a live ladies' entertainment committee, as we feel that this meeting will not be a success without the presence of the ladies. Bring them with you, Doctor, and come prepared to stay the whole session, and particularly to attend the banquet at its close (this includes the ladies).

Dubuque is prepared to welcome us with all her well-known hospitality, and the program of the

meeting which follows is so solid and attractive that it may reasonably claim the attention of every medical man in this and surrounding territory. It is not often permitted us to hear and meet personally such a galaxy of stars of the first magnitude as appear among the names on the program. You simply can't afford to miss such a magnificent treat. "A word to the wise is sufficient."

As has been well said, "Not only for scientific inquiry and discussion, but also to promote good-fellowship and a true fraternal and professional spirit, let us come together for a good time."

#### PROGRAM OF TRI-STATE DISTRICT MEDICAL SOCIETY.

##### *First Day—September 4th—Morning Session.*

- 7:00—Clinics at Finley and St. Joseph's Mercy Hospitals.
- 9:30—Address of Welcome—James Saul, Jr., Mayor of Dubuque.  
Response to Address of Welcome—Emil Windmueller, M. D., Councilor of Illinois State Medical Society, Woodstock, Illinois.
- 10:00—The Child's and Adolescent's Heart; Pathological Sequelæ—Daniel Lichty, M. D., Rockford, Illinois.  
Discussion—Dr. Paul E. Gardner, New Hampton, Iowa.
- 10:25—Symptoms and Diagnosis of Gall Bladder and Duct Disease—H. A. Sword, M. D., Milledgeville, Illinois.  
Discussion—Dr. I. N. Grow, Marengo, Iowa.
- 10:50—Indications for and the Technic of the Administration of Blood—E. S. Murphy, M. D., Dixon, Illinois.  
Discussion—Open.
- 11:15—Parental Alcoholism—L. R. Head, M. D., Madison, Wisconsin.  
Discussion—Dr. D. N. Loose, Maquoketa, Iowa.

##### *Afternoon Session.*

- 1:30—Prostatectomy Simplex. Another Plea for Conservation—J. T. White, M. D., Freeport, Illinois.  
Discussion—Dr. J. E. O'Keefe, Waterloo, Iowa.
- 1:55—Practical Consideration of Accessory Sinus Disease with Special Reference to Non-Operative Treatment—Henry G. Langworthy, M. D., Dubuque, Iowa.  
Discussion—Dr. A. E. Sherman, Aurora, Illinois.
- 2:30—Fracture of the Spine—T. W. Nuzum, M. D., Janesville, Wisconsin.  
Discussion—Dr. C. L. Best, Freeport, Illinois.
- 2:55—Newer Studies in the Prevention of Diphtheria with Special Reference to the Schick Test and Toxin-Antitoxin Immunization—Henry Albert, M. D., Prof. of Path. and Bact., Iowa City, Iowa.

Discussion—Dr. W. D. Stovall, Madison, Wisconsin; Dr. Guthrie McConnell, Waterloo, Iowa.

- 3:30—Before the Operation and After—L. W. Littig, M. D., Davenport, Iowa.

Discussion—Dr. J. Forest Bell, Elgin, Illinois.

- 3:55—Address in Surgery—Dr. A. J. Ochsner, Prof. of Surgery, University of Illinois, College of Medicine, Chicago, Illinois. Subject—Practical Hints Concerning Surgical After Treatment.

##### *Evening Session*

- 7:15—Address in Medicine—Dr. Victor C. Vaughan, Prof. of Hygiene and Physiological Chemistry, Ann Arbor, Michigan. Subject—Protein Poisons and Their Relation to Disease.
- 9:00—Charge of Entertainment Committee. Address—Dr. C. W. Hopkins, Chief Surgeon, C. & N. W. Ry., Chicago.

Separate evening entertainment is being arranged for the ladies by the Dubuque Ladies' Committee.

##### *Second Day—September 5th—Morning Session.*

- 7:00—Clinics at Finley and St. Joseph's Mercy Hospitals.
- 9:30—Repair of Fractures (illustrated)—A. Alguire, M. D., Belvidere, Illinois.  
Discussion—Dr. W. A. Munn, Janesville, Wisconsin.
- 9:55—Medical Treatment of Affections of the Nose and Throat—Grant W. Hatch, M. D., Rockford, Illinois.  
Discussion—Dr. W. B. Small, Waterloo, Iowa.
- 10:20—A Simple Drainage Apparatus for the Continuous Vacuum Treatment of Empyema of the Pleural Cavity—J. J. Grant, M. D., Freeport, Illinois.  
Discussion—Dr. Robt. White, Prairie du Chien, Wisconsin.
- 10:45—Address in Surgery—Dr. Edward Ochsner, Chicago, Illinois. Subject—A Specific for Every Pathological Micro-organism, the Ultimate Goal of Surgery.

##### *Afternoon Session*

- 1:30—Present Status of Blood Pressure—G. E. Crawford, M. D., Cedar Rapids, Iowa.  
Discussion—Dr. Wm. T. Lindsay, Madison, Wisconsin.
- 2:00—Address in Medicine—Dr. Wm. A. Pusey, Prof. of Dermatology, University of Illinois College of Medicine, Chicago, Illinois. Subject—A Critical Consideration of Some of the Present Problems in Syphilis.
- 3:30—Address in Surgery—Dr. Fred H. Albee, Prof. of Orthopedic Surgery, New York Post-Graduate Medical School, New York, N. Y. Subject—Plastic Bone Surgery, with Special Application to War Surgery. (Illustrated by motion pictures.)
- 5:00—Post Operative Oil Embolism; Its Symptoms, Etiology and Prevention (illustrated by Vitagraph)—Karl F. Snyder, M. D., Freeport, Illinois.



*Evening Session.*

6:00—Luncheon for the doctors and their ladies, followed by entertainment—probably boat ride on the Mississippi. In charge of the Dubuque Entertainment Committee.

*Third Day—September 6th—Morning Session*

7:00—Clinics at Finley and St. Joseph's Mercy Hospitals.

9:30—Direct Laryngoscopy—F. W. Broderick, M. D., Sterling, Illinois.

Discussion—Dr. L. Ostrum, Rock Island, Illinois.

9:55—Fracture of the Spine with Presentation of Case—W. P. Slattery, M. D., Dubuque, Iowa.

Discussion—Dr. Geo. P. Gill, Rockford, Illinois.

10:20—Address in Surgery—John B. Deaver, Prof. of Surgery, Medical Department, University of Pennsylvania. Subject—(To be announced later.)

*Afternoon Session.*

1:00—Some Difficult Diagnostic Surgical Problems (Illustrated by Cases)—D. R. Connell, M. D., Beloit, Wisconsin.

Discussion—Dr. B. A. Michel, Dubuque, Iowa.

1:25—Gastrotomy—J. W. MacDonald, M. D., Aurora, Illinois.

Discussion—Dr. P. A. Bendixen, Davenport, Ia.

1:50—The Use of Sodium Cyanide as a Respiratory Stimulant—A. S. Loevenhart, M. D., Madison, Wisconsin.

Discussion—Open.

2:15—A Defense of the Obstetrical Forceps—Wm. L. Allen, M. D., Davenport, Iowa.

Discussion—Dr. H. A. Brennecke, Aurora, Ill.

2:40—Diagnosis and Treatment of Pyloric Stenosis—H. M. Orr, M. D., La Salle, Illinois.

Discussion—Dr. C. A. Waterbury, Waterloo, Ia.

3:10—Address in Surgery—Dr. Charles H. Mayo, President A. M. A., Rochester, Minnesota.

*Evening Session*

6:30—Banquet for doctors and their ladies, Hotel Julian.

Toastmaster—Dr. Arthur Dean Bevan, Prof. of Surgery, Rush Medical College, Chicago, and President-elect of the American Medical Association.

Addresses and Toasts—

Dr. Arthur Dean Bevan.

Hon. William L. Harding, Governor of Iowa.

Hon. Emanuel L. Philipp, Governor of Wisconsin.

Hon. Frank O. Lowden, Governor of Illinois.

Dr. Charles H. Mayo, President of the A. M. A.

Dr. H. E. Dearholt, President, Wisconsin State Medical Society.

Dr. J. N. Warren, President, Iowa State Medical Society.

Dr. E. B. Coolley, President, Illinois State Medical Society.

Dr. John B. Deaver, Professor of Surgery, University of Pennsylvania.

*Leaders of Special Discussions During Session—*  
Iowa—

Dr. T. B. Throckmorton, Secretary, Iowa State Medical Society, Des Moines.

Dr. James R. Guthrie, Dubuque.

Dr. David S. Fairchild, Jr., Clinton.

Wisconsin—

Dr. Rock Sleyster, Secretary Wisconsin State Medical Society, Waupun.

Dr. C. R. Bardeen, Dean of Medical College, University of Wisconsin, Madison.

Dr. John F. Pember, Janesville.

Illinois—

Dr. E. W. Fiegenbaum, President-elect, Illinois State Medical Society, Edwardsville.

Dr. Jeremiah H. Stealy, Freeport.

Dr. August H. Arp, Councilor, Illinois State Medical Society, Moline.

## CHAIRMEN OF MEETINGS.

## PRESIDENT.

Dr. G. E. Crawford, Dr. Henry Albert, Dr. W. A. Rohlf, Dr. Paul E. Gardner—Councilors of Iowa State Medical Society.

Dr. Emil Windmueller, Dr. Edwin S. Gillespie, Dr. August H. Arp—Councilors of Illinois State Medical Society.

Dr. M. R. Wilkinson, Dr. Wilson Cunningham, Dr. F. T. Nye, Dr. G. Windesheim—Councilors of Wisconsin State Medical Society.

Signed,

W. B. PECK, President.

W. C. PHILLIP, Secretary.

## PROGRAM COMMITTEE.

Dr. Lawrence H. Prince, Madison, Wis.

Dr. Wm. H. Perry, Sterling Ill.

Dr. C. A. McGuire, Dubuque, Iowa.

## THE MEDICAL PRACTICE ACT

Illinois physicians are well pleased over the passage of the Medical Practice Act at the last session of the legislature. Much credit is due especially to Representatives Church, De Young, Dieterick, Guernsey, McDavid, Odum, Shurtleff and Snell, Senator Barr and Doctors Drake, Noble, Cooley, Bevan, Deal and Snell. We of Montgomery County are proud of the part some of our men took in this legislation. Dr. Bullington saw to it that his brother, Representative Bullington, who was on the House Judiciary Committee, was acquainted with all the facts of the case. Dr. Canaday had a heart-to-heart talk with his brother, Senator Canaday, who always has good following in the Senate. Dr. Snell, brother of Representative Snell of Macoupin, was one of the physicians who was honored by the opportunity to talk on this bill before the House Judiciary Committee. And we venture the opinion that before Dr. Snell had finished his talk the members of the committee were wishing, as we of Montgomery County have often wished, that Dr. Snell was a member of the legislature. There is a movement on foot in this country, and in our State in fact, to elect doctors to the legislature. There is never a session of that body that we do not need men there to explain and uphold the interests of pub-

lic health. We hope the time is not far distant when there will be more physicians in our legislature and that these men will be no less physicians than law makers.—*Bulletin of the Montgomery County Medical Society.*

### NEW SUPERINTENDENTS

The new created Department of Public Welfare, of which Charles Thorne, of Winnetka, was appointed Director, has recently made numerous changes in the State Hospital service, of which we note the following which may be of some interest to our readers:

Dr. Eugene Cohn, who began his medical career in St. Jacob in our county, is named head of the Kankakee State hospital, the largest in the state. Dr. Cohn at present is assistant superintendent of the Chicago State hospital at Dunning. He has been in the service twelve years, having risen by promotional examination from the ranks. He has served as assistant superintendent at Anna, Peoria, Kankakee and Chicago State hospitals. He has an enviable reputation as a surgeon. His work in surgery among the insane has attracted national attention.

Dr. C. H. Anderson, of McLeansboro, is the new superintendent of the Anna State hospital, vice, Dr. J. A. Campbell, resigned. Dr. Anderson for a number of years was superintendent of the Chester State hospital for criminal insane.

Dr. H. C. Carriel, of Jacksonville is named superintendent of the Dixon state school and colony at Dixon. This institution was created four years ago for the care and treatment of epileptics. It has been in process of construction and has not had a medical superintendent. The school has 1,000 acres and soon will be able to accommodate 500 patients. Dr. Carriel was for twelve years superintendent of the Jacksonville state hospital of which his father before him was superintendent for twenty-five years. It will be his duty at Dixon to open the buildings now finished and to develop the colony to its capacity which will be from 1,500 to 2,000.

Dr. George A. Zeller, of Peoria, is chosen superintendent of the Alton state hospital. Dr. Zeller was superintendent of the Peoria state hospital for ten years; he served four years as state alienist and has achieved a noteworthy and wide reputation as an administrator of state hospitals and as a friend of the insane.—*The Madison County Doctor.*

The department of public welfare announced the following appointments and transfers August 1:

Dr. Ralph T. Hinton, superintendent of the Peoria State Hospital, transferred to Elgin State Hospital, vice Dr. H. J. Gahagen, resigned. Dr. Hinton was superintendent at Elgin before going to Peoria, three years ago.

Dr. Charles E. Read, superintendent of the Watertown hospital, is transferred to the Chicago State Hospital at Dunning, vice Dr. George Leininger.

Members of the board of commissioners of public welfare were announced as follows:

Dr. E. C. Dudley of Chicago, chairman; Dr. Emil G. Hirsch of Chicago; Dr. F. P. Norbury of Springfield; Judge B. R. Burroughs of Edwardsville, and Dr. Edwin C. Hayes, sociology professor of the University of Illinois.

### Correspondence

#### UNIVERSITY OF ILLINOIS

COLLEGE OF MEDICINE,

CHICAGO, ILLINOIS.

July 9, 1917.

*To the Editor:* After thirty-five years continuous service in an official capacity in the College of Physicians and Surgeons of Chicago, now the College of Medicine of the University of Illinois, I tendered my resignation on July 1st, as Senior Dean and Professor of Surgery and Clinical Surgery and head of the department to President James of the University, and it has been accepted as you will see by the enclosed copy of letter.

My best wishes and influence shall always remain with the College and University during the remaining years of my activity; while my immediate personal services will be given to the Government in its present emergency.

Yours very truly,

DR. A. K. STEELE.

#### UNIVERSITY OF ILLINOIS

PRESIDENT'S OFFICE.

URBANA-CHAMPAIGN, ILLINOIS.

July 9, 1917.

*To the Members of the Faculty College of Medicine, University of Illinois:*

*My Dear Sir:* I have accepted, subject to the approval of the Board of Trustees of the University of Illinois, the resignation of Dr. D. A. K. Steele as dean of the Senior College of the University of Illinois College of Medicine.

Dr. Steele has performed a long and brilliant service to medical education in the city of Chicago. Under great difficulties he has labored in season and out of season to raise the level of medical training and medical research. Without financial means, in the midst of opposition, he has succeeded in building up a college which will find its final fruition in one of the well-equipped and well-organized departments of a great state university. The thanks of the Board of Trustees



and the appreciation and esteem of his colleagues and the students and alumni of the University follow him in his future career and their very best wishes attend him, especially in his extraordinarily active interests in the organization and development of the health service of our national defense.

Dr. A. C. Eycleshymer, professor of anatomy in the College, has been appointed dean of the College until further notice.

Faithfully yours,  
EDMUND J. JAMES.

### THE MEDICAL SITUATION.

Chicago, Aug. 3, 1917.

*To the Editor:* The war has come upon us at a most critical time in medical affairs. As a result of the myopic influence of self-appointed directors of medical education, liberally supported in their pernicious activities by limitless endowments of one sort or another, the number of medical students in reputable medical schools has been falling off at the rate of about 1,500 a year. There has grown up at the same time an army of chiropractics and other cults of would-be medical practitioners from "schools" with hordes of deluded students.

As the legitimate increment of medical men and curing doctors has been cut off by forces acting upon medical faculties, by forces acting on legal authority, and by the discouragements inevitable to a long, tedious and uninspiring tutelage, the irregular practitioners, the osteopaths and other manipulators, have come into their own because the sick folks want attention and comfort and are willing to pay for it. They don't know that they need science, and such dehumanized science as is offered them by the product of our pedantic medical schools they are unable to stomach.

Thus in the United States, with a total population of 100,000,000, and 130,000 practicing physicians and an annual increment of less than 4,000 new licentiates, we are called upon by the draft to give up all of our medical students, to the number of 15,000, and at the same time to lose all of the fit young men between twenty-one and thirty-one from whom new students could be recruited.

It is possible that some of the losses in our medical students and the young medical men who

are going across seas can be made up from those rejected as lame, halt or blind, or as alien enemies, if our schools admit on academic qualifications only. But we believe that it would be a serious handicap to the medical profession of the future if the sources of its recruits were limited to those unfit for military service.

There ought to be 50,000 physicians and surgeons for each 1,000,000 soldiers sent to France. These men ought to be physically fit and thoroughly equipped by proper hospital and clinical experience. They need not all be young and capable of going into the ranks; indeed, a considerable portion of them ought to be men over fifty, who have had experience in administrative affairs of a broad and extensive sort. It is obviously as unwise to limit medical military service to a birthday age below fifty-five as it is to require every youth of a birthday age of twenty-one to thirty-one to go into the trenches.

If the war lasts six years, and there is no reason to think that it will terminate sooner, the scarcity of medical attendants in the United States, regular or irregular, will be very great. With less than 100,000 physicians of suitable age and reasonably fit physical condition to draw from, the first two drafts of 1,000,000 men each will leave the medical affairs of the United States in the hands of the decrepit, the infirm, and the alien enemies. If we learn from the experience of England, we will see to it that such a condition does not arise.

There seem to be certain things which we as a profession ought to do at once. First of all, we ought to see to it that the draft does not disturb any legitimate pursuit of medicine by any student, fit or unfit for military service, now matriculated or preparing for the study of medicine in college or scientific school. It is inevitable that a large number of theoretically prospective medical students will be diverted to the more inspiring fields of aviation, engineering, and other activities of war. The enrollment of medical schools is likely to fall off, or be recruited from the unfit, from alien enemies, and possibly from "slackers" (if medical students become exempt).

We ought to cut off, in the second place, all the red tape, all the academic fol-de-rol and the titled and hooded frumpery which have fastened themselves on our medical faculties and our state examining bodies. Medical students should be accepted before their intellectual and normal en-

thusiasm has been fagged out by agnostic collegiate disciplinarianism. Until the end of the war, a high school education, with the urge that goes with it to do, is better equipment for a medical student than the bachelor's or doctor's degree, with the intellectual fag with which it is ordinarily sealed.

It is our duty as a profession to fill the medical school with young students and to there foster and teach methods of cure, and not the tricks of passing examinations. The school itself should be imbued with the necessity of curing the sick and not of presenting therapeutic nihilism and scientific pessimism, to the confusion of the student and dwarfing of the spirit to serve and care for the sick.

It is necessary to combine, co-ordinate, concentrate and intensify the medical curriculum. Make clinical service by the student his first and every-day lesson from the moment of matriculation to the end of his medical tutelage. Our present day medical graduates are not conspicuous for professional enthusiasm, for diagnostic judgment, for therapeutic resourcefulness, or for humanitarian and social inspiration. Our present day medical disciplinarians do not promote a love for science in the service of man.

With the reorganization of the medical school should come a reorganization of our medical societies. They should be made democratic and socially helpful. Every other class of service has taken on a "class conscience" since the beginning of this war and it is time that the medical societies should lay aside their oligarchic form and become democratic. They should abolish their constitutions and houses of delegates, and be ruled by temporary and local conditions and serve at once the community, the patients and the families of those who are called to war. This and these things are patriotic duties, necessary, reasonable and opportune.

BAYARD HOLMES.

## MEDICOLEGAL

### "OPHTHALMOLOGIST" AND OPTOMETRY

(*McNaughton vs. Johnson (U. S.), 37 Sup. Ct. R. 178*)

The Supreme Court of the United States affirms an order denying the complainant an injunction to

restrain the enforcement of the California statute regulating the practice of optometry, but which provides that it shall not be construed to prevent duly licensed physicians and surgeons from treating the human eye. The court says that the complainant claimed to be a regularly graduated ophthalmologist, which is a school of scientific learning and practice confined to the treatment of the inflammation of the eye and its membranes and in fitting glasses to the human eye; that she did not employ either medicine, drugs or surgery, nor was there anything in her practice hurtful to the individual or dangerous to society, and that there was no law in the state of California prescribing an examination for and regulating the practice of ophthalmology. She charged that the act regulating the practice of optometry offended the Fourteenth Amendment of the Constitution of the United States in that it deprived her of her property without due process of law and denied her the equal protection of the laws; and as specifications of the last she instanced the exemption from the provisions of the act of licensed physicians and surgeons; the appropriation to the sole use of registered optometrists of the right to employ any means other than the use of drugs in the measurement of the powers or range of vision; the denial to all other schools of scientific learning and practice the right to measure the range of human vision other than by the use of drugs on equal terms with the physician and surgeon; and contended generally that her occupation being a lawful one, not hurtful to the individual or dangerous to the community, the state had no power to impose discriminatory regulations on it. It is established that a state may regulate the practice of medicine, using this word in its most general sense. The complainant tried to escape from the rulings of those cases by which that is established by asserting a discrimination against her. She was an ophthalmologist, she averred, as above stated. She attacked the statute because, to use the language of her counsel, it "arbitrarily discriminates against every other school of scientific knowledge and practice in favor of the school employing drugs in determining the accommodative and refractive states of the human eye." It undoubtedly does, but gives the name of the school that of "optometry" and its practitioners "optometrists." This court cannot suppose that any injury was done her by the difference in names, and yet she gave no other tangible ground of complaint. Whether they are different, and whether the difference is of substantial or unsubstantial degree, she did not inform the court. She practiced one of them in preference to the other, and for the practice of that one the state has declared that its certificate of competency is necessary. The state has such power.—*Journal A. M. A.*



## Public Health

### DOCTORS RESPOND TO WAR'S FIRST DEMANDS

#### MEDICAL PROFESSION STANDS FIRST IN PATRIOTIC SACRIFICE

Aside from the scores of Illinois physicians who have volunteered for service in the Medical Reserve Corps of the United States Army and Navy and aside from those who have become connected with the various hospital units now in the fields or subject to call, almost 1,200 are giving their time without compensation to the duties connected with exemption boards and the examination of the recruits for the newly conscripted national army. For the latter service alone more than 12 per cent of the total number of physicians in the State are giving their service to the nation.

There are 227 exemption boards in Illinois, on each of which there is one regular medical member and on 56 of these boards more than one physician is serving, making a total of 283 physicians as members of these boards. Of these 227 districts 86 are located in Chicago and 9 in Cook County outside of the city, making a total of 95 for Cook County. There are 132 boards in the State outside of Cook County, 118 being county boards and 14 located in the down state cities.

In addition to the medical service on the exemption boards proper, there will be required 914 physicians to serve as re-examiners and assistant examiners of conscripts, 351 of whom will serve in Chicago, 500 in the down state counties and 63 in the down state cities.

No other profession is contributing so much in this time of the nation's peril as the medical profession, and yet there is a belief among those who are supposed to know that the demands upon the profession for wartime service have but begun.

### SANITARY SERVICE ABOUT THE ROCKFORD CANTONMENT

For the purpose of rendering efficient sanitary service in the zone about Camp Grant, the United States Government Cantonment at Rockford, the State Department of Public Health, the United States Public Health Service, the American Red Cross and the local health authorities are co-operating on a constructive plan.

The sanitary supervision of this zone will be under the direction of a sanitary engineer designated by the State Department of Public Health, and the Corps engaged in carrying out the program will be developed from the several co-operating agencies to such an extent as needs may indicate.

The State Department of Public Health is now engaged in the preparation of Rules and Regulations for the Control of Venereal Disease which will be in

force in the Rockford zone as well as in the zones which will be established about the other mobilization camps in Illinois under the provisions of a law enacted by the past General Assembly. This law gives to the State Department of Public Health very broad powers in the abatement of nuisances and also conditions prejudicial to the public health or prejudicial to the health of the soldiers in military camps, and these powers may be exercised throughout the zone extending one-half mile beyond the limits of any military camp in the State.

### TYPHOID IN DECATUR

A serious outbreak of typhoid fever explosive in character developed at Decatur during the middle and latter part of July. Twenty-one cases were reported up to the 28th and all of them were confined to the same general neighborhood.

Five cases were reported as having developed about July 15th and five on July 17th. It was found that all persons reported, with one exception, had used milk from the same dairy.

The premises at this dairy were found to be extremely insanitary and a sample of milk taken by a representative of the State Department of Public Health showed four million bacteria to the cubic centimeter.

No typhoid carriers were found to be connected with the milk distribution of this dairy, but the cows have constant access to a creek which receives the sewage from several institutions in the City of Decatur and which is used for bathing and whose banks are a favorite resort for picnics and outings. Some places along the shores of this creek were found to be foul from human waste.

The State Department of Public Health is actively co-operating with the health authorities of Decatur and it is hoped that secondary infections from the original foci will be prevented.

### SANITARY SURVEY AT FREEPORT

The first complete Health and Sanitary Survey to be carried out by the State Department of Public Health through its newly created division of Surveys and Rural Hygiene, is being rounded out in the City of Freeport and the field work is practically done.

This survey includes the study of the water supply, sewerage system, garbage collection and disposal, street cleaning, school sanitation, medical supervision of school children, houses, communicable diseases including tuberculosis, and public health administration. A critical study was made of the vital statistics of the city with comparison of the figures of the statistics of other communities of like size and similarly situated.

During the course of the survey, which covered a period of five weeks, every home in the city was visited for the purpose of ascertaining the sanitary conditions and for the collection of other important data.

While the work was done by the State Department of Public Health and under the direct supervision of Paul L. Skoog, representing the department, it was essentially a community undertaking in which cordial co-operation was given by the city authorities, the Chamber of Commerce, the Stephenson County Medical Society, the Freeport Woman's Club and many individual citizens.

The survey findings are now being compiled in the offices of the State Department of Public Health and will be published in the near future in more or less permanent form.

PREVALENCE OF INFANTILE PARALYSIS

The exact interpretation to be given to statistical data in regard to the prevalence of acute anterior poliomyelitis in Illinois at this time is a matter of question. Accepting the figures exactly as they appear, one is impressed that the number of cases for the first half of 1917 is largely in excess of the cases for the same period in 1916 and that the disease is distributed over a much wider geographical area. During the first six months of 1916 poliomyelitis appeared in 18 counties, while during the first six months of the present year the diseases was reported from 33 counties. Up to July 1, 1916, the total number of cases reported in Illinois was 51, while so far this year 72 cases have been reported.

Without careful analysis the mortality from the disease seems striking. During the first half of 1916 there were but 3 deaths from infantile paralysis reported to the division of vital statistics of the State Department of Public Health, while so far this year there have been 13 deaths, making the death rate for 1917 nineteen per cent of reported cases, as compared with the 1916 death rate of six per cent.

The conclusions drawn by the hasty reader are that poliomyelitis is more widespread and more threatening at the present time than it was a year ago and that it is appearing in a more malignant and more fatal form. As a matter of fact it is very doubtful if there have been as many cases during 1917 as during the same period in 1916. The concern about the disease when it appeared in epidemic form on the Atlantic seaboard last year and when the disease developed to the extent of 1,000 cases in Illinois, caused a very general discussion and a new interest in its diagnosis on the part of the medical profession, with a result that diagnoses are being made more promptly and accurately with reports of cases of questionable character which were not reported last year.

It has also been ascertained by representatives of the State Department of Public Health, who have traveled throughout the State engaged in poliomyelitis work, that a considerable number of children who died early in 1916 and whose deaths were ascribed to other causes are now believed by their attending physicians to have died of infantile paralysis. These unrecognized fatal cases give an apparent low mortality and doubtless account to a considerable extent

for the apparent high mortality noted during the present year.

Despite the available figures, Dr. C. St. Clair Drake, Director of the State Department of Public Health, feels that the general situation is more satisfactory than a year ago, and that while there is occasion for care and watching there is no reason for grave apprehension.

RESULTS OF THE PHYSICIANS' EXAMINATION HELD BY THE ILLINOIS STATE BOARD OF HEALTH IN CHICAGO  
January 24-25-26, 1917

Present .....	72
Passed .....	48
Failed .....	23
Incomplete .....	1
Per cent failed, 32.4.	

PASSED		Total No.
College—	Year Grad.	Passed
Chicago College of Med. & Surg.	1915 (1), 1916 (8), 1917 (4)	13
Chicago Hospital College of Medicine	.....	1916 1
Hahnemann Medicine College	.....	1915 1
Harvard Medical School	.....	1916 1
Jenner Medical College	.....1915 (1), 1916 (1)	2
Johns Hopkins	.....	1916 1
Keokuk Medical College	.....1896 (1), 1905 (1)	2
Loyola University (Bennett)	.....1916 (9), 1917 (1)	10
Meharry Medical College	.....	1915 1
Rush Medical College	.....1915 (1), 1916 (6)	7
St. Louis University	.....1915 (1), 1916 (1)	2
University of Greece	.....	1900 1
University of Illinois	.....	1916 1
University of Iowa	.....	1916 1
University of Louisville	.....	1910 1
University of Maryland	.....	1916 1
University of Minnesota	.....	1908 1
Vanderbilt University	.....	1910 1

FAILED		Total No.
College—	Year Grad.	Failed
Chicago College of Med. & Surg.	.....	1916 5
Chicago Hospital College of Medicine	.....	1915 2
Hahnemann Medical College	.....	1915 1
Hospital College of Louisville	.....	1904 1
Imperial University Moscow	.....	1895 1
Loyola University (Bennett)	.....	1916 4
Meharry Med. Coll.	.....1912 (1), 1913 (1), 1915 (1), 1916 (2)	5
National University, Chicago	.....	1903 1
Reliance Medical College	.....	1911 1
Royal College of Scotland	.....	1909 1
Rush Medical College	.....	1896 1

RESULTS OF THE PHYSICIANS' EXAMINATION HELD BY THE ILLINOIS STATE BOARD OF HEALTH IN CHICAGO  
February 21-22-23, 1917

Present .....	29
Passed .....	11
Failed .....	18
Per cent failed, 62.1.	

PASSED		Total No.
College—	Year Grad.	Passed
Chicago College of Medicine & Surg.	.....	1916 3
Jenner Medical College	.....	1916 1



Loyola University (Bennett).....	1916	4	FAILED	Total No.
Rush Medical College .....	1914-1916	2	Withdrew .....	1
University of Colorado.....	1916	1		
		11	Per cent failed, 11.3.	

College—	Year Grad.	Failed	College—	Year Grad.	Passed	Total No.
Bennett Medical College.....	1910 (1), 1915 (1)	2	Chicago College of Med. & Surg.....	1916 (8), 1917 (44)	52	
Chicago College of Med. & Surgery.....	1916	3	Chicago Hospital College of Medicine.....	1917	7	
Chicago Hospital College.....	1915 (2), 1916 (1)	3	College of Medicine & Surgery, Chicago.....	1910	1	
College of Medicine & Surgery (Chgo.).....	1910	1	Eclectic, Cincinnati .....	1917	1	
Hospital College of Louisville.....	1904	1	Hahnemann Medical College, Chicago.....	1917	14	
Jenner Medical College.....	1910	1	Harvard Medical School.....	1915	1	
Karolinska Med. Coll. Stockholm.....	1892	1	Hospital College, Louisville .....	1904	1	
Loyola University (Bennett).....	1910 (1), 1916 (1)	2	Jefferson Medical College .....	1917	1	
National Univ. of Greece.....	1905	1	Jenner Medical College.....	1916 (1), 1917 (7)	8	
National Univ. of Arts & Science.....	1916	1	Loyola University (Bennett Medical).....	1916 (3), 1917 (11)	14	
University of Louisville.....	1908 (1), 1911 (1)	2	Meharry Medical College.....	1916	1	
		18	National University of Greece.....	1905	1	

RESULTS OF THE PHYSICIANS' EXAMINATION  
HELD BY THE ILLINOIS STATE  
BOARD OF HEALTH IN CHICAGO  
May 3-4-5, 1917

Present .....	143
Passed .....	113
Failed .....	27
Incomplete .....	3
Per cent failed, 19.3	

College—	Year Grad.	Passed	Total No.
Bennett Medical College.....	1910 (1), 1915 (1)	2	
Chicago Hospital College of Medicine.....	1915 (1), 1916 (2)	3	
Chicago College of Medicine & Surgery .....	1916 (2), 1917 (37)	39	
Columbia University .....	1901	1	
Hahnemann Medical College.....	1917	7	
Loyola University (Bennett).....	1916 (5), 1917 (9)	14	
Medico-Chirurgical Pennsylvania.....	1916	1	
Northwestern University.....	1917	10	
Rush Medical College.....	1916 (1), 1917 (23)	24	
University of Illinois.....	1917	11	
University of Southern California.....	1916	1	

College—	Year Grad.	Failed	Total No.
Bennett Medical College .....	1914	1	
Chicago College of Med. & Surg.....	1916 (6), 1917 (4)	10	
College of Medicine and Surgery.....	1910	1	
Hahnemann Medical College, Chicago....	1915 (1), 1917 (1)	2	
Jenner Medical College .....	1915 (1), 1916 (1)	2	
Loyola University (Bennett).....	1916	2	
Meharry Medical College .....	1913 (1), 1916 (2)	3	
Northwestern University .....	1917	1	
Reliance Medical College .....	1911	1	
Royal University of Naples.....	1914	1	
University of Louisville .....	1911	1	
University of Moscow .....	1895	1	
Female Institute Charcow.....	1914	1	

RESULTS OF THE PHYSICIANS' EXAMINATION  
HELD BY THE ILLINOIS STATE  
BOARD OF HEALTH IN CHICAGO  
June 14-15-16, 1917

Present .....	214
Passed .....	189
Failed .....	24

College—	Year Grad.	Failed	Total No.
Bennett Medical College.....	1914 (1), 1915 (1)	2	
Chicago College of Med. & Surgery.....	1916 (2), 1917 (8)	10	
Chicago Hospital College of Med.....	1915 (1), 1916 (1)	2	
Hahnemann Medical College.....	1917	1	
Jenner Medical College.....	1912 (1), 1916 (1)	2	
Loyola University (Bennett).....	1916	1	
Marion-Sims-Beaumont .....	1902	1	
Meharry Medical College.....	1915 (1), 1916 (2)	3	
Physicians & Surgeons, St. Louis.....	1910	1	
University of Illinois.....	1917	1	

Society Proceedings

CHICAGO LARYNGOLOGICAL AND  
OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Tuesday evening, December 19th, at 7:30 o'clock in the rooms of the Graduate School of Medicine.

The President, Dr. Otis H. Maclay, in the Chair.

DR. ELMER L. KENYON presented a boy of nineteen with a falsetto voice which had been present since the age of fourteen.

DR. JOSEPH BECK read a paper entitled

SALIENT FACTS REGARDING TONSILS IN  
CHILDREN AND ADULTS. (A reply to  
the papers and discussions of the last  
meeting.)

As to indications for operation, that is tonsillectomy whether in children or adults, Dr. Beck made a broad statement, that with enumerating a few contraindications, every tonsil is better out than in and I have no knowledge of a single instance where the patient was worse off from the tonsillectomy than he would have been with the tonsils in. He referred to tonsillectomy and not tonsillotomy, or tonsillectomy and pharyn-

gectomy combined. The contraindications given were:

1. All acute inflammations or infections.
2. Luetic, particularly ulcerative processes.
3. Advanced tuberculosis.
4. Advanced cardiovascular changes, that is in such individuals as would be endangered by any sort of a surgical procedure. This is true in all constitutional diseases where the anemia is very marked, as leukemia, pernicious anemia, etc.
5. Advanced cases of diabetes mellitus.
6. In non-clotting of the blood, as in true hemophiliacs, cholemiacs.
7. In blood pressure over 225 systolic.
8. In infants below year.
9. In grave mental diseases in which marked excitation is present, as Grave's, Basedow's maniacal state, etc.
10. Anyone that has never had sore throat and is in perfect health, as shown by physical and laboratory examinations.

Dr. Beck said that he was cognizant of the fact tonsillectomies are, have been and perhaps will be performed in many of the above mentioned conditions, but he advised against such procedures. He thought that tonsillectomy was here to stay, and that any effort to stop the splendid work in making a stronger, better race would be a discredit to the profession. It should be the purpose of the profession to improve the technic so as to do away with any and all possible dangers from the operation.

Dr. Beck said that one important bad result reported at the previous meeting was that the scars or deformities cause trouble with a fine voice. He has never seen any bad effect nor heard complaint following a carefully performed tonsillectomy with the capsule. He had developed an operation (intra-capsular tonsillectomy), and following the contraction of these scars there had been complaints of pain in the throat, but they were not lasting.

Another bad effect from a tonsillectomy radically performed was symptoms resembling cretinism and marasmus in infants up to the third year. Consequently, with the rarest exception they do not operate under that age.

Dr. Beck said that since the adoption of general anesthesia a post operative neurosis did not often occur. He thought that the laryngeal reflexes should never be allowed to become abolished for a second. The anesthesia should be just deep enough to have the pharyngeal muscles completely relaxed and the patient be unconscious.

The aspiration of blood, he said, could always be prevented by employing suction and immediate permanent control of the bleeding. They had never had a case of either abscess or pneumonia following tonsillectomy. He thought the best way to do with bleeding vessels was to grasp them and tie them.

The use of iodine or balsam of Peru and olive oil would diminish the secondary reaction of exudate formation and infiltration. Tincture of iodine applied to the fossa or gargling with warm, weak tea and

seltzer water in equal parts would relieve the resultant ear aches, pain on swallowing and the distinct nasal twang to the voice.

Dr. Beck had found that the routine use of bicarbonate of soda, 30 to 60 grains, in half a pint of water, introduced per rectum about one-half hour before operation would help to prevent acidosis, which occasionally follows tonsillectomy.

Very frequently the lymphoid tissue at the base of the tongue and back of the posterior pillars will undergo marked hyperplasia, but this does not last long and only in rare instances is it necessary to attack it surgically.

Dr. Beck considered tonsillectomy of benefit in disturbance of the glands of internal secretion. Many such cases being corrected or brought to a standstill by tonsillectomy. He called attention to the recent work done by Rosenau and Nuzum in infantile paralysis which had shown that in practically every child who had a tonsillectomy previous to the attack of the paralysis the disease was mild and complete recovery followed, and all the cases that had the tonsils removed subsequent to the paralysis made a more speedy recovery than those that did not.

The speaker said that one of the most disappointing results following tonsillectomy was the failure to obtain the expected benefit from the operation, either of the local or more frequently general or distant conditions. It had occurred that following a perfect tonsillectomy the patient had had an attack of acute sore throat, an examination had revealed a white spot or two. This was not tonsillitis but a folliculitis in the lymphoid tissue which in many instances had increased as a compensatory factor.

When a general condition, such as articular or peri-articular rheumatism, endo-, myo-, or peri-carditis, pleuritis, myositis, neuritis and perineuritis, nephritis with a characteristic blood picture of a chronic septic absorption does not immediately disappear in every instance following tonsillectomy, there appears to be some skepticism as to the value of the procedure. In most of these cases satisfactory results will ultimately ensue, especially if aided by autogenous vaccination and the elimination of other foci. A fair number of patients suffering from the above mentioned conditions fail to improve no matter what is done. An alcoholic neuritis, a brachial plexus neuralgia from pressure of a supernumerary rib or sciatica from pressure of a sliding sacroiliac joint will, of course, not be influenced by tonsillectomy. Dr. Beck thought that otosclerosis, probably due to disturbed function of the glands of internal secretion, was often brought to a standstill by tonsillectomy.

#### DISCUSSION

DR. NORVAL H. PIERCE said he was very much relieved at the mildness of Dr. Beck's remarks and considered his views regarding certain matters admirable, but his disagreed with the axiom "that a tonsil is better out than in." He thought that if we accepted such a position it would eliminate all intelligent consideration of the subject. He said the danger to the patient had not been properly appreciated; there was danger from the



anesthetic, danger of shock—whether local or general—the danger of sepsis, the danger of pneumonia, etc.

Dr. Pierce was somewhat changed in his ideas regarding age being a counter indication to the removal of tonsils. He thought if there was a definite indication for removal the question of age should not be a counter indication. He thought that much of the painful sore throat following tonsillectomies was due to the fact that nerves in contact with the tonsillar capsules had been caught in scar tissue, thus causing a radiating pain low down in the throat. As to the depth of the anesthesia, the speaker reiterated his view that it is safer for the patient and much more agreeable for the operator if the laryngeal reflex is abolished.

As to the connection between otosclerosis and the tonsils, Dr. Pierce considered that purely hypothetical. He said there was no one fact that could be brought out to prove that there is a connection between the tonsils and the otosclerosis. He believed that possibly we were on the threshold of very interesting disclosures as to the connection between the tonsils and poliomyelitis, but he thought the experiments that had been performed were still in such a primitive stage that they should hardly be brought out in discussion.

Dr. ARTHUR M. CORWIN said he believed the essayist was eminently sane, and also Dr. Pierce, in most respects. He thought there could not be a wide disagreement among them as to the reasons for a thorough tonsillectomy. When a laryngologist made a thorough examination of his patient, from bald spot to toe nails, he knew whether to advise removal of the tonsils or not, whatever the age of the patient. As to the minor differences in technic and handling hemorrhages, there were bound to be wide variations. He said that however good a man considered his technic and however favorable his average results, it would do him more good to go and watch the other fellow operate than to read volumes or listen to hours of discussion. He never found it necessary to sew pillars together, and has never yet, in many thousands of cases in the old and young, had he found it necessary to ligate an artery in the throat. He thought the thing to do was to take the tonsil out in the technically best and most complete way we knew how—for the right kind of a fee.

Dr. ELMER L. KENYON thought it was impossible to talk in a final manner on any subject where the knowledge was not yet complete, and certainly it was not complete concerning what we did or might do to the structure of the tonsil when we removed it outside the capsule. He believed that he knew that the so-called capsule of the tonsil could not be separated with any accuracy from the intrapharyngeal aponeurosis. He said he knew from personal knowledge that the palato-pharyngeus muscle had been in certain cases so badly destroyed and the resulting scar tissue so harmful to the soft palate as to render the patient's voice permanently impaired, even when the operation had been done by very skillful hands. He thought that from the standpoint of the singing voice the palato-pharyngeus was especially important.

Dr. GEORGE W. BOOT thought that the "tonsil habit" was a bad habit for the laity to get. The operation of tonsillectomy is not free from dangers such as amputation of the uvula, injury to the soft palate and pillars. These accidents happen not only to beginners but even to good operators, so that the operation should not be recommended without good cause.

Dr. P. J. H. FARRELL said that Dr. Pierce had referred to the question of the anesthetic; he thought it was a well known fact that complete anesthesia was the one which gave the least shock and danger. Dr. Farrell has heard only the last few paragraphs of Dr. Peck's paper; he thought that no case of neuritis was ever cured by operating on the tonsils. As to the effect of tonsillectomy on the voice, Dr. Farrell was sure that no adult voice has even been improved by a tonsil operation and that many thousands of valuable voices have been ruined by such operations. The speaker thought one should be very conservative about operating upon the tonsils of professional singers or speakers. If the palato-pharyngeus muscle is destroyed the case is hopeless, so far as restoring the voice of the singer of public speaker is concerned.

Dr. ROBERT SONNENSCHN said he would take the liberty of speaking in regard to Dr. Corwin's remarks. He had fol-

lowed his suggestion about seeing other men operate and had learned many things. He had seen Dr. Corwin operate by the Sluder method, and he had used the same method, but he could not understand how it was that he had never had to ligate a vessel. With the most careful technique, Dr. Sonnenschein had found it impossible to avoid ligation in some cases.

Dr. ARTHUR M. CORWIN, replying to Dr. Sonnenschein, stated that the ordinary technic which he followed for control of hemorrhage was to operate the patient standing at the patient's right. As soon as he removed the patient's left tonsil his assistant on the left of the patient went in with his finger wrapped with gauze, instantly controlling all hemorrhage. He then reached for the Corwin tonsil hemostat which was fitted with a good sized pad that would fill the sinus, being larger or smaller according to the case. This was put in immediately carrying a little styptic, 25 per cent of tincture of iron in glycerine. He then went after the other, the near tonsil, in the same manner. Dr. Corwin said the hemorrhage could be controlled by these hemostats, finger and sponge carrier by a little judicious pressure—sometimes a little more and sometimes a little less.

Dr. JOSEPH BECK, in closing, said if he had given the impression of operating every patient he saw he wished to correct it. Tonsils were only taken out of patients when he thought they needed to have them taken out. In the opinion of Dr. Beck the dangers are not at all alarming if you know how to handle the patient. He forestalled the danger of hemorrhage by strictly surgical measures. He thought the hyperplasia following tonsillectomy was not compensatory and did not indicate that the tonsil had a function. He believed that otosclerosis has nothing to do with the tonsils as a local process, but that the chronic infection had to do with whatever caused otosclerosis, and that his cases were better with tonsils removed. They never allowed the laryngeal reflexes to be abolished under anesthesia, but the pharyngeal reflexes were abolished. Dr. Beck could not see why one did not or should not have to ligate a "spurter"; he considered that preferable to going to the patient's room and using more pressure. He thought every operation should be done as quickly as possible. As to neuritis, Dr. Beck agreed that no alcoholic or pressure neuritis had been cured, but infectious neuritis disappeared after the focus of infection was removed.

Dr. CHARLES H. LONG read a paper entitled

#### ACUTE SUPPURATING MASTOIDITIS WITH TYMPANITIS, PERISINOUS ABSCESS. PHLEBITIS AND STREPTOCOCC- MIA; OPERATION AND RECOVERY

Dr. LONG said that acute inflammation of the mastoid process accompanying or following suppurations of the middle ear was a common occurrence, but was rather rare when there was an insignificant cause and no discharge from the external auditory meatus. He reported the case of a female patient age twelve years who entered the Post Graduate Hospital on May 5th, 1916, suffering from chills, fever, vomiting, great prostration and severe pain in the left ear. She had had a severe head cold about the middle of April and later in the month complained of being very chilly. On the afternoon of May 1st, severe pain in the left ear developed and in spite of treatment the patient grew gradually worse.

On May 5th, there was temperature of 104.2° F., pulse 120, respirations 36; no meatal discharge, no tympanitis, membrane red and injected, the nose and throat normal. The ear drum was freely incised, a wick drain inserted and external dry heat applied to

the mastoid. After the paracentesis the pain moved to the opposite side of the head and continued with great severity until relieved by aspirin. The gauze was removed from the meatus, discolored with only dry blood from the incision. The following two days she was free from head pain but more toxemic, sleepless and delirious. There was great variation of temperature, the maximum being 104.6° F., at noon. She was then seized with pain in the region of the appendix and there was involuntary urination. Blood count gave a leukocytosis of 16,000.

On the 9th she was seen by a neurologist who diagnosed lateral sinus thrombosis. No X-ray taken. Indications of meningitis were more pronounced. On the 11th the simple mastoid operation was performed; the inner table was very soft, necrotic, the greater portion being removed with the curet, exposing small pools of pus and masses of exudate which hid the sinus from view. The bone was removed in every direction until healthy dura appeared. With the vein uncovered and examination of the sinus was made with a curved applicator, but it seemed to be free from coagula. To make certain, a long incision was made in the sinus; the blood gushed freely from both ends, no clots appeared and the hemorrhage was controlled by packing.

On the 13th spinal puncture revealed the spinal fluid normal and not under increased pressure. Following this the patient made an uneventful recovery, leaving the hospital June third.

Dr. Long thought that nose and throat cleansing solutions often did more harm than good and that as prophylactic measures in ear infections they were worse than useless.

#### DISCUSSION

DR. GEORGE W. BOOT called attention to the infrequency with which mastoid operations were required in the scarlet fever wards of the Cook County Hospital since nasal irrigations had been stopped as part of the routine treatment of scarlet fever.

DR. L. J. HUGHES, of Elgin, reported the case of a man of thirty-eight who worked in a rather damp place. He had a cold, complained of his hearing and ran a temperature for some time. Middle ear involvement was suspected but nothing positive could be demonstrated until the patient developed a tenderness over the antrum. The ear drum was practically normal, no apparent sign of trouble in the middle ear. When mastoid tenderness appeared he incised the membrane and pus flowed out under high pressure. Under local irrigation and wick drain the condition cleared up without further trouble, but it was hard to localize the infection.

DR. JOSEPH BECK said he had had no experience in such a case as Dr. Long's, but was reminded of a case of so-called primary mastoiditis with sinus thrombosis with no history of a cold or nose or throat infection. Chills and fever were present and as the patient came from the South, malaria was suspected. Blood examination proved that it was a septic process. There was no tenderness even about the mastoid, but there was a history of suppuration in the ear long before. Ear examination and hearing were normal, but X-ray examination showed a typically sclerosed mastoid. They operated and found much the same condition that Dr. Long had described. Dr. Beck thought that in cases with chills and fever which the blood examination did not account for, it would do less harm to expose the sinus and have a look at it than to wait a week with meningeal symptoms developing.

DR. CHARLES H. LONG, in closing the discussion, said that

In his case the mastoid operation was delayed owing to the poor co-operation between the laboratory and the consultants.

#### CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Tuesday evening, February 20, 1917, at 7:30 o'clock in the rooms of the Graduate School of Medicine of Chicago.

The president, Dr. Stanton A. Friedberg, in the chair.

Dr. Otto M. Rott presented a case for diagnosis.

The patient was a man aged forty years. About a week previously he had suffered from an attack of dizziness, nausea and vomiting, following an argument. He also had a cold at the time and felt some pressure in the ear from the cold. Blowing the nose relieved the feeling of pressure. There was a chronic suppuration in the attic of the right ear which had apparently healed, with the exception of a few crusts, which were removed every month or two. There was spontaneous nystagmus to the left when the patient looked to the left, and the question was whether it was a physiological nystagmus or a nystagmus of the first degree. The results of the hearing test were: Whisper heard at one foot on the right side and two feet on the left. Low whispered tones were heard better than the high; Rinne was negative on the right, positive on the left. On turning to the right with head inclined forward 30 degrees there was a nystagmus of only six seconds to the left. On turning to the left there was no nystagmus. Syringing both ears with cold water produced no nystagmus and no vertigo.

In summing up Dr. Rott said the patient had a dead vestibular apparatus on the right side and an underfunctioning vestibular apparatus on the left. The deafness was of the internal ear type. On the right side there were two factors: middle ear deafness and the internal ear deafness, and there were unmistakable evidences of internal ear deafness on the left as well. Examination of the left ear showed a slight bulging of Schrapnell's membrane, and just what it was due to was a matter for discussion. There was great retraction of the membrane propria. The blood Wassermann reaction was negative, but the spinal fluid gave a 1 plus positive reaction. Dr. Rott had thought of the possibility of a specific labyrinthitis on the left side and evidently the vestibular apparatus on the right was dead.

#### DISCUSSION

Dr. George E. Shambaugh stated that it was quite clear there were two conditions present in Dr. Rott's ear trouble. In the first place, there was the evidence of the middle ear trouble—strongly retracted drum membranes, with a pathological condition in the region of Schrapnell's membrane. On one



side this consisted of a large perforation with erosion of the bony wall. The presence of a crust along the upper wall of the canal was evidence that the suppurative process was still active. It is this type of condition which not infrequently produces a fistula in the horizontal canal. In the second place, there was unmistakable evidence of a nerve deafness, and this was as marked on one side as on the other. It is not at all probable that a labyrinthitis from middle ear infection would cause simultaneous involvement of the two ears and in about the same degree. Such a condition is usually dependent upon a neuritis resulting from some systemic infection. Of course, a syphilitic infection is the one most frequently responsible for this type of condition.

Dr. J. Holinger read a paper entitled "Congenital Deformities of the Ear."

The specimen of a badly deformed ear gave the occasion to review the literature on the subject and to find the explanation of a number of peculiarities of these deformities in embryology. The labyrinth, the auditory nerve and the central organs of hearing start from the auditory vesicles which begin to be formed in the third week of embryonal life. Deformities here are most often in both ears, they are microscopical and lead to deaf-mutism. Deformities of the external ear have their origin much later in embryonal life, and are most frequently confined to one ear only. Considerable hearing is sometimes found in such an ear. On operating on a deformed ear the function ought to be taken into consideration. This complicates the operation considerably, but the results as to hearing and as to the looks of such an ear warrant the additional work.

#### DISCUSSION

Dr. George E. Shamhaugh said such cases had a good deal of practical interest since deformities of the external ear were met with rather frequently. These children are usually brought to the specialist while they are still quite young by the parents, who are anxious to have an operation to correct the condition. An operation in these cases, of course, should only be undertaken where the abnormality does not involve the internal ear; in other words, where one can demonstrate positively that the function of the internal ear is still present and the operation to be done is one of providing an artificial meatus. The best results that one can hope for is to make an opening that reaches the antrum. It is apparent at once that operations of this kind cannot be undertaken in very young children, since one must wait until one can demonstrate the presence or absence of hearing.

Dr. Joseph Beck stated that he had been working on this subject from the plastic side, and it was certainly a very difficult matter to treat the thing where there was no cartilage, and most cases have a great deficiency of that material. He had recently seen three cases in a family of this ablation of the middle ear, including deafness and in one a congenital partial facial paralysis. The cases were in a cousin and two brothers, and the father of the two boys had volunteered the statement that he was very deaf until the age of twelve, when he suddenly heard, and he was hopeful that the boys would get their hearing. Dr. Holinger had omitted to mention the value of the x-ray in these cases, and the speaker thought that gave a great deal of information as to the bony structure left; very striking pictures are often obtained, as compared to normal mastoids. One might say there were deficiencies around the squama. In the cases of the two brothers, one had practically no ear on one side and on the other there was a lapped ear with just a little dimple on the external canal. The difficulty was to make an opening that would remain; there was a tendency for the opening to close all the time.

Dr. Beck thought that deformities of the ear were very

interesting and cited a case of traumatic ear that he had operated that afternoon. He had succeeded in building up an ear from the scalp and body, using the arm as a transplant and expecting to make the ear stiff by using the fascia lata. He recommended the use of this material as changing from soft to tissue of almost bony substance. He had found it excellent for stiffening the ear. It could be obtained from the patient if an adult, and in case of a child it could be obtained from the parent, taking it as close as possible from the trochanter.

Dr. George W. Boot said that a few years ago three children were born in Evanston without cerebra or cranium, and he was fortunate enough to secure the head of one of them. He passed around a section from the labyrinth showing complete absence of the organ of Corti and Reissner's membrane. Apparently the scala media failed to develop and the scari vestibuli and scala tympani were fused into one. The cochlear tube thus formed showed marked deformity.

Dr. Otto M. Rott read a thesis entitled "Indications for Operative Intervention on the Labyrinth in Infective Labyrinthitis Secondary to Suppurative Conditions of the Middle Ear."

After citing in chronological sequence the various opinions held on this subject by a representative body of otologists during the past decade, the author classified these opinions as follows:

(a) Ultra-radical, when the labyrinth operation was advised as soon as any form of labyrinthitis was diagnosed. Jansen was the exponent of this view.

(b) Radical, when the labyrinth operation was advised during the acute stage of diffuse suppurative labyrinthitis, as soon as the diagnosis was made, without waiting for evidences of meningeal involvement. Those who subscribed to this view were Freytag, Hinsberg, Barany, Neumann, Ruttin, Urbantschitsch, Ballenger, Mackenzie, Whiting, Braun and Freisner, Dighton, Leidler, Perkins, and Campbell.

(c) Conservative when the labyrinth operation was advised only when meningitis is threatened or present. Those holding this attitude were Dench, Uffenorde, Barany, Kopetsky, Alexander, Kerrison, Shambaugh, Duel, Henninger, Danziger, Saunders, and Phillips and Broder.

(d) Ultra-conservative when no labyrinth operation was permitted during the acute stage. Blackwell is the exponent of this view.

2. Another interesting phase of the subject, and one which apparently has not been definitely settled, is the question as to the advisability of performing the radical mastoid operation in the presence of an acute, diffuse labyrinthitis, without at the same time opening the labyrinth.

While the consensus of opinion, which in some instances is quite dogmatically expressed, is opposed to the practice of performing the mastoid operation in these cases without at the same time opening the labyrinth, because of the danger of setting up a fatal meningitis, there are a few men who throw the weight of their authority in favor of such a practice in certain instances.

Those who condemn this practice are: Hinsberg, Davis, Barany, Alexander, Kerrison, Ruttin, Mackenzie, Brock, Whiting, Braun and Freisner, Ballenger, and Dighton.

Those who favor the practice under certain conditions are Burger, Duel, Dench, and Broder.

Duel thinks it is all right in acute otitis cases, providing all concussion is avoided; and Dench states that the single operation is justified if the labyrinthitis is latent and there are no labyrinth symptoms.

3. Concerning the question of the danger of accidental dislocation of the stapes during the radical mastoid operation, and the bearing of this accident on the indication for opening the labyrinth, only three authors express themselves, namely, Hinsberg, Alexander and Kerrison. Hinsberg and Alexander advise immediate operation on the labyrinth in cases of labyrinthitis following operative trauma, while Kerrison goes one step further and advises the labyrinth operation as soon as the accident occurs, before the labyrinthitis develops. The reason given in each case is that the labyrinthitis which follows this accident usually gives rise to a fatal meningitis.

4. As to the course of procedure in the circumscribed variety, the consensus of opinion is in favor of the principle of non-operative interference on the labyrinth, excepting, of course, the ultra-radical views of Jansen, who operates all cases, whether circumscribed or diffuse. However, Barany, Neumann, and Ballenger state that they would deem the labyrinth operation in circumscribed labyrinthitis justifiable, when the irritable labyrinth continued to give rise to periods of intense vertigo, as to incapacitate the patient for work. Here, particularly if the hearing in the other ear is good, destruction of the irritable labyrinth is advised.

From the study of the literature the author offers the following conclusions relative to the indications for operative interference on the labyrinth:

1. In acute, diffuse, suppurative labyrinthitis, the only time a labyrinth operation should be considered is when symptoms of meningeal involvement supervene upon those of the labyrinthine infection.

2. In any other type of diffuse labyrinthitis no labyrinth operation because of the labyrinth condition per se, should be performed. If, however, the middle ear suppuration is of such a type as to present indications for the radical mastoid operation, then the radical mastoid operation should be immediately followed by the labyrinth operation.

3. The only conditions presenting labyrinth symptoms in which the mastoid operation alone is indicated are:

- (a) That condition of perilabyrinthitis in which the labyrinth itself has not become involved, and
- (b) The circumscribed variety of labyrinthitis with the exception of those cases which continue to give rise to incapacitating symptoms of vertigo and in which hearing in the other ear is

good. In this condition the labyrinth operation is indicated.

4. Should the stapes be dislocated accidentally during the radical mastoid operation, or should appearances of the labyrinth capsule (as pus exuding from oval window) at this time, first draw our attention to the possibility of a labyrinthitis, then the safer course would be to open the labyrinth at once.

#### DISCUSSION

Dr. Alfred Lewy complimented the writer on his excellent review of the literature. He believed there would be less confusion if we divided the labyrinth cases into two groups: those with a live labyrinth and those with a dead labyrinth.

Those with a live labyrinth should not be operated, but put at rest, except that a mastoid operation is done if sepsis or intracranial complications threaten.

Those with a dead labyrinth—that is, those in which there is total deafness and no response to any labyrinth test, are subdivided into two classes: the manifest and the latent. In the manifest cases the patients are put at absolute rest with quiet; no operation is done unless intracranial complications or sepsis supervene, then the labyrinth operation, as well as the mastoid, must be done immediately.

In the latent cases a mastoid operation is done when indicated, and if at this operation actual invasion of the labyrinth is seen, the labyrinth is also operated; otherwise not.

Labyrinthitis occurring after mastoid operation is usually serious, and is treated conservatively. If, however, invasion of the labyrinth was found at the operation, the labyrinth is operated on secondarily.

The operations achieve only drainage, for cure we must depend upon nature's defense, the plastic exudate. There is great danger in interfering with this.

#### LOGIC

An Easterner, superintendent of an Indian school out in South Dakota, nodded toward a prim, grave little miss.

"Sometimes," said he, "the arguments of children are unanswerable. You see that little girl over there in the second row with straight, black hair tied with brown ribbon? She is a chief's daughter. Her father and mother are decidedly civilized, and she is being brought up in a household as civilized as a New Yorker's. In argument it is almost impossible to get the better of her.

"I wish I had a new doll," she said to her mother one day.

"But your old doll is as good as ever," her mother replied.

"So am I as good as ever," the little miss retorted, "but the doctor brought you a new baby."—*Harper's*

#### IT DIDN'T FIT

Young William was evincing much interest in the evening paper, but finally a puzzled look came over his countenance.

"Mother," said he, finally, "what does D—d stand for?"

"Doctor of Divinity, my son. Don't they teach you the common abbreviations in school?"

"Sure; but that don't seem to sound right here."

"Read it out loud."

"Witness: I heard the defendant say, 'I'll make you suffer for this. I'll be doctor of divinity if I don't!'"—*Harper's*.



**MADISON COUNTY***June Meeting*

The Madison County Medical Society met at the Home and School for Nervous and Backward Children on June first, 1917. Our president, Dr. J. B. Hastings, was not present having been called as an officer of the Medical Officers Reserve Corps to Ft. Benjamin Harrison at Indianapolis. Public duties also prevented the attendance of our vice-president, Dr. J. H. Siegel. Dr. E. C. Ferguson, of Edwardsville, was chosen president pro tem.

Nineteen members and thirteen were present.

The minutes of the April and May meetings were read and approved. Dr. Jos. W. Kempff, of Highland, was elected to membership.

On motion of Dr. E. A. Cook, the Alton State Hospital was selected as the place for holding our July meeting and Dr. Cook was asked to make all necessary arrangements.

Dr. R. S. Barnsback as chairman of the committee, presented resolutions on the death of Dr. W. W. Everett of Highland.

In response to a letter from the Alton Public Council, \$100.00 was appropriated to the tuberculosis work of the community nurses in the city of Alton. Dr. R. S. Barnsback was instructed to confer with the Alton Public Health Council relative to county tuberculosis nurses and to make such arrangements as was deemed best in his judgment.

In the absence of Dr. J. B. Hastings, the president's annual address was read by Dr. E. A. Cook. The subject of the paper was "The Duties of the General Practitioner Toward the War Situation," and outlined the necessity of a generous response by the profession to call by the government for medical men to act as medical officers in the army now forming. The paper was an excellent one and was generously discussed and by vote was ordered printed in the ILLINOIS MEDICAL JOURNAL. Dr. Mather Pfeifferberger in his "Echoes From the State Meeting," gave a general resume of the work done in the House of Delegates which was very interesting, particularly to those members who were not present at the state meeting.

Dr. Carl E. Black, chairman of the State Centennial Commission urged all present to assist in securing a full history of the medical work done in the state during the past century. Drs. Bliss, Johns and Sewald of St. Louis presented quite a number of unique and instructive pathological specimens taken at the City Sanitarium of St. Louis, of which Dr. Johns is superintendent. The presentation of these added very much to the interest of the meeting. Dr. E. A. Cook introduced the following resolutions, which were adopted without dissenting vote:

*Whereas*, The members of the Madison County Medical Society are in sympathy with the Medical Officers Reserve Corps and deeply interested in the individual members of the society; therefore be it

*Resolved*, That to all members who may go to serve our country and humanity, we pledge our support in any way possible. Also that we direct our interest

and attention in a kindly way to their families whose welfare we have at heart; furthermore, be it

*Resolved*, That we follow the suggestion of our president, Dr. Hastings, and prepare ourselves on military sanitation and its allied branches.

A unanimous vote of thanks was given to our speakers, after which elegant refreshments were served by our host and hostess for which, and for the genial hospitality extended, a rising vote of appreciation was tendered. Adjourned to meet at the Alton State Hospital on the first Friday in July.

*July Meeting*

The Madison County Medical Society met on the grounds of the Rock Springs Country Club in Alton on July 6, 1917, with the president, Dr. J. H. Siegel, in the chair. Twenty members and twenty-three were present.

The minutes of the last meeting were read and approved. Dr. Wm. H. Dempsey was elected to membership. The transfer card of Dr. H. P. Macnamara of Granite City, from the Sangamon County (Ill.) Medical Society, was read, upon motion, the same was accepted and Dr. Macnamara was entered as a member of this society.

The secretary announced Collinsville as the place for the next meeting. On motion, the local profession were requested to select a suitable meeting place. On motion of Dr. W. H. C. Smith, the secretary was instructed to send greetings to our president, Dr. J. B. Hastings, at Ft. Benjamin Harrison. Dr. E. B. Coolley of Danville made a highly appreciated address on patriotism with especial reference to the duties of medical men toward the government. The address was given marked attention and was received by the hearers with the seriousness demanded by the occasion. Dr. Ferguson moved that a vote of thanks be given our speaker for his presence and for his splendid address.

Refreshments were provided by the local profession for which a rising vote of thanks was tendered.

On motion adjourned to meet in Collinsville on the first Friday in August.

**PIKE COUNTY**

The Pike County Medical Society met in Nebo on July 31st, and held one of its most successful meetings. The day was clear, roads very good for motoring, and the fields on every hand showing a splendid prospect for almost all kinds of crops. In this part of the state, the Doctor's prosperity depends much on Ceres; hence much interest is taken in all the fruits of the fields.

A fine chicken dinner was provided and thoroughly enjoyed by everybody. The meeting was held in the Christian Church and many of the laity were present to hear medical matters discussed. In addition to the members of this society there were present, Drs. McReynolds of Quincy, Adams, Black, Dewey, Jones, Milligan, Morgan, and Stacy of the Morgan County Society, and Dr. Hetherlin of Pike County, Mo., Society.

Dr. McIntosh of Chambersburg, and Dr. Emma Gay of Rockford were elected to membership. The application for membership of Dr. Dinsmore of Nebo was presented and will be voted upon at the next regular session.

A report of the committee appointed to interview the board of supervisors relative to pauper practice in the county was made by Dr. Peacock. It showed an apparent understanding would be reached that would be satisfactory to all.

Dr. McReynolds of Quincy then presented an extremely interesting paper on "War Surgery in France, as it is at Present." The doctor has just returned and is going back soon, so that the personal presentation of the subject by a participant had more than usual significance. It received marked attention, also the photographs and war relics which were passed around for inspection.

After this Mrs. Wells and daughter of Pleasant Hill each sang several solos with violin obligato, which were much enjoyed by all.

Dr. Kuntz of Baylis then read an exhaustive paper on "Gall Stone Disease," which showed much research. This was discussed by Drs. Black, Stacy, Milligan and others. The society then adjourned to meet at Pittsfield at the next regular session.

W. E. SHASTID, Secy.

---

## Personals

---

Dr. Charles Adams has returned after a stay of several months in the Hawaiian Islands.

Dr. Norman Bridge, Los Angeles, spoke, June 20, before the Intercollegiate Club.

Dr. George A. Zeller, Peoria, has been appointed superintendent of the Alton State Hospital.

Dr. H. Douglas Singer, Hospital, has been appointed alienist to the department of public health.

Dr. Herman M. Adler, Boston, has been appointed criminologist to the state department of public welfare.

Capt. Frederiek O. Frederiekson has been commissioned major, and assigned to command of Field Hospital No. 3.

Dr. Sidney D. Wilgus, Rockford, has declined the position offered him as superintendent of the Chicago State Hospital.

Dr. Henry B. Carriell, Jacksonville, has been appointed state superintendent of the Dixon School and Colony for epileptics.

Dr. Allen B. Kanavel delivered a lecture before the City and County Medical Society, Portland, Ore., July 16, on "Infections of the Hand."

Dr. S. Viotor Balderston, Evanston, director of the Northwestern Ambulance Company, No. 9, has been commissioned captain, M. O. R. C., U. S. Army.

Dr. Willis O. Nance, Chicago, was appointed a member of the consulting staff of Cook County Hospital, June 25, to succeed the late Dr. John B. Murphy.

Dr. Cyrus H. Anderson, McLeansboro, has been appointed superintendent of the Anna State Hospital, succeeding Dr. Joseph A. Campbell (resigned).

Dr. Eugen Cohn, assistant superintendent of the Chicago State Hospital, has been appointed superintendent of the Kankakee State Hospital, and will take charge of the Institution, August 15th.

Dr. Hugh McGuigan recently lectured before the faculty and students of the Graduate Summer Quarter in Medicine of the University of Illinois on "Blood-Sugar in Relation to Diabetes."

Dr. Wallace C. Abbott, Chicago, has been elected president and Dr. George H. Searle, Chicago, secretary-treasurer of the American Association of Pharmaceutical Chemists at its annual meeting in Atlantic City, June 13.

Dr. George Thomas Palmer, Springfield, has been appointed assistant director of the state department of health and is in charge of the defense of Illinois troops from tuberculosis, which is said to have been so prevalent in the European armies.

---

## News Notes

---

—Dr. Lillian Hobbs-Seymour, Chicago, was convicted of murder after a criminal operation, July 13.

—Dr. T. B. Spalding, who practiced medicine in Edwardsville about 40 years ago, is now living at an advanced age in Tuscarora, Cal.

—Be sure to read the June number of the ILLINOIS MEDICAL JOURNAL. It is intensely interesting.—*The Madison County Doctor*. Thanks! It will always be worth reading with your help.



—The last meeting of the Montgomery County Medical Society was held at Nokomis Tuesday evening, July 3rd. Dr. M. H. Irwin read a very interesting paper on "Amebic Dysentery."

—Dr. Perry H. Wessel, Moline, is defendant in a suit for having performed an autopsy on the mangled body of a man who was unidentified at the time.

—Plans for the proposed La Salle County Tuberculosis Sanatorium have been submitted to the supervisors. The institution will cost \$65,000 and will accommodate about fifty patients.

—Illinois Field Hospital Company No. 4, commanded by Major James J. McKinley, was mustered into the federal service, July 21, by Capt. Edward G. Huber, M. C., U. S. Army.

—The new building of the Chicago Lying-In Hospital was opened recently. The hospital will have 120 beds and will be "open," i. e., any reputable physician may treat patients in the hospital.

—Illinois Field Ambulance Company No. 1 was mustered into service, July 22, by Lieut.-Col. Jacob Frank, chief surgeon, Ill. N. G. The company is under the command of Capt. George U. Lipshulch.

—Governor Lowden signed a bill appropriating \$20,000 for investigation, by the health insurance commissioner, of sickness and death claims of families not covered by the workmen's compensation act.

—The Medical Women's Club of Chicago had its annual meeting, June 13, and elected the following officers: Dr. Clara P. Seippel, president; Drs. Louise Acres and Helga Ruud, vice presidents; Dr. Mary Agnes B. Mulcahy, secretary, and Dr. Grace H. Campbell, treasurer.

—At the annual meeting of the board of directors of the Physicians' Club of Chicago, Dr. Arthur M. Corwin was elected president, Dr. Henry W. Cheney, treasurer, and Dr. William D. Napheys, secretary. The other directors are Drs. John Weatherson, Daniel N. Eisendrath and A. Augustus O'Neill.

—The following members of the new board to examine medical practitioners have been named by Francis W. Shepardson, director of the department of registration and education: Dr. L. C. Taylor, Springfield; Dr. Carl E. Black, Jack-

sonville, and Dr. J. A. Robison, Dr. G. M. Cushing and Dr. W. L. Noble, Chicago.

—The Western Suburbs Anti-Mosquito Association, which includes the suburbs of Maywood, Forest Park, River Forest, Melrose Park, Bellewood, Oak Park, the forest preserves and Aurora, will endeavor to eliminate the mosquito from the western suburbs of Chicago, by spraying crude oil on the surface of all ponds and swampy places.

—The following committee has been appointed to arrange for the care of soldiers and sailors of the United States and their dependent families: Drs. E. Wyllys Andrews, Arthur Dean Bevan, Frank Billings, Joseph P. Cobb, Arthur M. Corwin, John M. Dodson, Allen B. Kanavel, Lewis L. McArthur, Albert J. Ochsner, A. Augustus O'Neill (chairman), William E. Quine, Thomas E. Roberts, John A. Robison, George H. Simmons, Homan Spalding, Samuel C. Stanton, Daniel A. K. Steele and Clarence L. Wheaton (secretary).

—The Iowa and Illinois Central District Medical Association, at the meeting in Davenport, July 12, elected the following officers: president, Dr. Louis Ostrom, Rock Island; vice-president, Dr. William Rendleman, Davenport; secretary, Dr. L. W. Littig, Davenport; treasurer, Dr. F. H. First, Rock Island; reporter, W. D. Chapman, Silvis. Drs. J. W. Seids, Moline, and G. F. Harkness, Davenport, were re-elected on the board of censors. Their terms expired at this meeting. The board is of the same personnel as before, Drs. W. L. Allen, Davenport, and L. C. Moore, Reynolds, being the other members.

—Steps to weed out all tubercular soldiers from the Illinois national guard were taken Aug. 4th, when the war department ordered ten contract surgeons to Chicago to examine the men.

The surgeons called into active service from Washington are:

Drs. Willard W. Dicker, Harry G. Hardt, John Ritter, N. C. Nelson, Robert H. Hayes, Edward M. Heacock, Ethan Allen Gray, George A. Gardner, Daniel W. Rogers and B. Westcott Rogers. First Lieutenant Walter W. Hamburger of the medical reserve corps was ordered to report to General Barry as head of the tuberculosis examining board.

Captain John M. Willis, medical corps, was designated as sanitary officer of the camp at Houston, where the Illinois guard will train.

—The National Board of Medical Examiners held its second examination in Washington, D. C., June 13 to 21. There were twenty-four qualified candidates, twelve of whom appeared for examination, the others having been ordered into active duty between the time of their application and the date of the examination. Of the twelve who took the examination nine passed.

The next examination will be held in Chicago, October 10 to 18. The regular Corps of the Army and Navy may be entered by successful candidates, without further professional examination, providing they meet the adaptability and physical requirements.

There will also be an examination in New York City in the early part of December.

---

## Marriages

ALLEN JOSEPH HRUBY, M. D., to Miss Sylvia Petrtyl, both of Chicago, May 16.

THOMAS HENRY LEWIS, M. D., to Mrs. Charles Mair, both of Chicago, June 16.

EDWARD G. SCHUSSLER, M. D., Oak Lawn, Ill., to Miss Grace E. Hart of Mount Forest, Ill.,

CAPT. ELBERT CLARK, M. O. R. C., U. S. Army, to Miss Helen Johnson, both of Chicago, July 11.

WALTER GEORGE MCGUIRE, M. D., to Miss Frances Elizabeth McCormick, both of Chicago, June 20.

CHARLES ERWIN PITTE, M. D., to Miss Ethel Julia Lyon, both of Chicago, recently.  
June 20.

JOHN EUGENE GARREY, M. D., Aurora, Ill.; Rush Medical College, 1878; aged 69; formerly a member of the Illinois State Medical Society; a member of the staff of the Aurora City Hospital; died in Telluride, Colo., June 29.

DANIEL FREDERICK GRASSE, M. D., Chicago; Rush Medical College, 1899; aged 45; formerly a member of the Illinois State Medical Society; assistant in genito-urinary surgery in his alma mater; died from meningitis in the Elgin State Hospital, July 3.

NELSON HORATIO LOWRY, M. D., Woodhull, Ill.; Hahnemann Medical College, Chicago, 1872; aged 70; for half a century a practitioner of Woodhull; a veteran of the Civil War; died at his home, May 22, from cerebral hemorrhage.

JAMES H. RAINWATER, M. D., New Canton, Ill.; Missouri Medical College, St. Louis, 1889; aged 58; a Fellow of the American Medical Association; died at his home, May 13, from pneumonia.

FRANK WILDER RASTALL, M. D., Chicago; Loyola University, Chicago, 1907; aged 40; a veteran police ambulance surgeon of the city; was instantly killed, July 2, in a collision between his ambulance and an automobile truck.

JOHN WESLEY SAUCERMAN, M. D., Winslow, Ill.; Rush Medical College, 1863; aged 79; formerly a member of the Illinois State Medical Society; died at his home, July 2, from cerebral hemorrhage.

GEORGE W. VEACH, M. D., Wilmette, Ill.; Western Reserve University, Cleveland; aged 93; for more than forty years a practitioner of New Castle, Pa.; died at his home, June 2.

HIRAM K. WHITNER, M. D., Chicago; Jefferson Medical College, 1859; aged 81; surgeon of United States Volunteers during the Civil War; for many years an inventor; died at his home, June 13.

---

## Deaths

JOSEPH L. ABT, M. D., Chicago; University of Michigan, Ann Arbor, 1892; College of Physicians and Surgeons, Chicago, 1893; a Fellow of the American Medical Association; and instructor in Northwestern University Medical School and a member of the staff of the Post-Graduate hospital; died in Eagle, Wis., June 28, after a nervous breakdown.

WILLIAM HERMAN BELL, M. D., Bellevue, Ohio; University of Michigan, Ann Arbor, 1892; aged 46; formerly a member of the Ohio State Medical Association; died in Dr. Reed's Hospital, Cincinnati, May 24, after an operation on the colon.

WILLIAM J. CHEANY, M. D., Petersburg, Ill.; Rush Medical College, 1892; aged 47; formerly a member of the Illinois State Medical Society; died in Hot Springs, Ark., June 7.

---

## Book Notices

THE SURGICAL CLINICS OF CHICAGO, Volume I, Number 3 (June, 1917). Octavo of 231 pages. 70 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Published bi-monthly. Price per year, paper, \$10.00; cloth, \$14.00.

This volume of clinics represents the clinics of twenty-one surgeons in the various hospitals of Chicago. Many interesting and instructive cases are noted. We believe these clinics have established a firm following, as they represent the work and efforts of some of the best surgeons in America.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEYS. By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Professor of Clinical Medicine, University and



Bellevue Hospital Medical College. Fourth edition, thoroughly revised. Octavo of 666 pages, 301 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Cloth. \$5.50 net; half morocco, \$7.00 net.

This new edition of Greene & Brooks is one of the best works in the English language on the diseases of the genito-urinary organs and kidneys. Both the medical and surgical sides are treated thoroughly, as this work is the result of the combined efforts of an internist and a surgeon, making it an extremely valuable treatise. The personal experience of both authors is extensively drawn upon. Although a large book, no padding is observed. It is thoroughly up to date and should prove a useful aid to both physician and surgeon.

1916 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minn. Octavo of 1014 pages, 411 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$6.50 net; half morocco, \$8.50 net.

The Mayo Papers are the result of an endeavor to place before the profession the work done by the staff of the Mayo clinic. No one can deny the usefulness of such a volume, as it places in one's hands the work and efforts of a body of highly skilled men, each a leader in his particular branch of medicine and surgery. A collection of papers such as this is bound to increase the knowledge and skill of the reader, as the papers are practical as well as scientific.

The book is divided into sections on the alimentary canal, the urogenital organs, the ductless glands, the blood, the head, trunk and extremities, technic and general. An index of contributors, a bibliographic index and an index of subjects are included. The bibliographic index is quite extensive, and furnishes a medium for more extensive study.

The value of this volume cannot be appreciated without personal examination, except it be by those who are possessors of the previous volumes.

THE ELEMENTS OF THE SCIENCE OF NUTRITION. By Graham Lusk, Ph. D., Sc. D., F. R. S., (Edin.), Professor of Physiology at Cornell Medical School, New York. Third edition, reset. Octavo of 641 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, \$4.50 net.

The rapid increase in the knowledge of the importance of nutrition as a means of treatment of various diseases, such as diabetes, nephritis, gout, Graves' disease, myxoedema, anemia, etc., has resulted in this third edition of Lusk. Its value cannot be gainsaid. The subject is presented in a thoroughly scientific manner.

There are chapters on diet in the normal individual, the growing, and the influence of protein foods, fats and carbohydrates, on metabolism. Many important items are noticed throughout the book. The present edition has about 240 more pages than the second edi-

tion, necessitated by the extensive use of dietic treatment in disease. It should be a useful edition in the doctor's library.

A TEXT-BOOK OF FIRST AID AND EMERGENCY TREATMENT. By A. C. Burnham, M. D., Medical Corps, U. S. R., Instructor in Surgery in the Polyclinic Hospital, New York City; Attending Surgeon, Department of Surgery, Vanderbilt Clinic, College of Physicians and Surgeons, New York City. Illustrated with 160 engravings and 2 plates. Price, \$2.00. Lea & Febiger, Philadelphia and New York, 1917.

This is a book prepared to train the volunteer assistant, the camper, the sanitary corps of the Army and Navy, boy scouts, nurses' aids, and others interested in the principals of first aid and emergency treatment. Particular stress is laid upon the diagnosis and treatment. No superfluous matter is incorporated, and only methods of treatment that are of proven value are given. The language is plain, and methods of treatment gone into fully. For those interested this book can be recommended for study.

THE TREATMENT OF EMERGENCIES. By Hubley R. Owens, M. D., Surgeon to the Phila. General Hospital; Asst. Surgeon to the Phila. Orthopedic Hospital and Infirmary for Nervous Diseases; Chief Surgeon to the Phila. Police and Fire Bureaus; Asst. Surgeon Medical Reserve Corps, U. S. Navy. 12mo. volume of 350 pages with 249 illustrations. Philadelphia and London, W. B. Saunders Company, 1917. Cloth, \$2.00 net.

This first aid book is written by a physician who has had an extensive experience in the treatment of emergencies, based upon lectures delivered by him to various bodies of students interested in this particular topic. It is complete enough to enable one familiar with its contents to render safe and efficient first aid. It can be recommended not only to the medical student, but also to those who are often placed in a position when knowledge of first aid is essential or necessary.

UROLOGY. Diseases of the Urinary Organs, Diseases of the Male Genital Organs, The Venereal Diseases. By Edward L. Keyes, Jr., M. D., Ph. D., Professor of Urology, Cornell University Medical College; Surgeon to St. Vincents and Urologist to Bellevue Hospital. With 204 illustrations in the text and 18 plates, 4 of which are colored. D. Appleton & Co., 1917. New York and London.

One has only to compare the present Keyes' Urology with the one of 1904 to realize the immense progress in urology in the last thirteen years. The Keyes of today is an altogether different book—a new book in fact as well as name. Modernism without fadism or dogmatism is observed throughout its pages. An extensive personal experience, with the results obtained, is drawn upon to increase its value.

The book is divided into five parts—the principles

of urology, gonorrhoea and diseases of the urinary organs, diseases of the genital organs, operative surgery and an appendix on syphilis, all of which are excellent and thorough.

The illustrations are numerous and good. A pleasant change noted is in the use of paper not so highly glazed, which makes it more comfortable to read. We bespeak a successful future for the new Keyes.

**HANDBOOK OF GYNECOLOGY FOR STUDENTS AND PRACTITIONERS.** By Henry Foster Lewis, A. B., M. D., Professor and Head of Department of Obstetrics and Gynecology in Loyola School of Medicine; Chief of Obstetrical Staff of Cook County Hospital; Fellow and Ex-President of the Chicago Gynecological Society; Late Assistant Professor of Obstetrics and Gynecology in Rush Medical College; and by Alfred de Roulet, M. S., M. D., Professor of Gynecology in Loyola University, School of Medicine; Attending Gynecologist in the House of the Good Shepherd and in St. Bernard's Hospital; Obstetrician and Chief of Staff of St. Margarets Home and Hospital. With 177 illustrations. Price \$4.00. C. V. Mosby Company, St. Louis, 1917.

The authors have endeavored to supply a text-book of gynecology based upon their experience as teachers and clinicians. No attempt has been made to make it more than a hand-book, as they well state that "they have tried to appreciate that gynecology is a lesser subject than medicine, surgery or obstetrics." No extensive descriptions of major operations are given, the authors being of the opinion that experience and not descriptions of operations make surgeons. However, the subject is very well presented, no method of diagnosis or treatment of value being overlooked. It is extensive enough both for the student and the practitioner, not specializing in this particular field. The illustrations are good and mostly original. It should be well received.

**IMPOTENCY, STERILITY AND ARTIFICIAL IMPREGNATION.** By Frank P. Davis, Ph. B., M. D., Fellow American Medical Association; Ex-Secretary Oklahoma State Board of Medical Examiners; Former Superintendent Oklahoma State Institution for Feeble-Minded; Author of "How to Collect a Doctor Bill," "The Doctor: His Book of Poems," "The Physician's Vest-Pocket Reference Book," etc.; Formerly Editor and Publisher, Davis' Magazine of Medicine. C. V. Mosby Company, St. Louis. 1917.

This is an interesting little volume based on the results of the author's investigation and experience. Its small size is rather an advantage, as the author has succeeded in presenting the subject thoroughly without padding or repetition. For those interested in these subjects it should prove useful.

**ROENTGEN TECHNIC (DIAGNOSTIC).** By Norman C. Prince, M. D., Attending Roentgenologist to the Omaha Free Dental Dispensary for Children; Associate Roentgenologist to the Douglas County Hospital, Bishop Clarkson Memorial Hospital, Swedish

Immanuel Hospital, St. Joseph's Hospital, and Ford Hospital, Omaha, Neb. With Seventy-one Original Illustrations. Price, \$2.00. C. V. Mosby Company, St. Louis, Mo., 1917.

This book is written especially for the general practitioner who has installed X-ray apparatus. It should enable one to use his apparatus intelligently and furnish plates of value. It can be recommended to all owners of X-ray apparatus for its value in increasing their technical ability.

**PHYSICAL EXERCISES FOR INVALIDS AND CONVALESCENTS.** By Edward H. Ochsner, B. S., M. D., F. A. C. S., President, Illinois State Charities Commission; Attending Surgeon, Augustana Hospital, Chicago. Illustrated. C. V. Mosby Company, St. Louis. 1917. Price, \$75c.

This book is one that the author felt was needed for the instruction of his patients during convalescence, for invalids and persons leading a sedentary life. Its low price and simplicity should recommend it for extensive use among those for whom it is intended. A knowledge of its contents will aid the physician in the use of physical exercise when indicated.

**MEDICAL AND SURGICAL REPORTS OF the Episcopal Hospital or the Protestant Episcopal Church in Philadelphia.** Volume 4. Press of Wm. J. Dornan, 1916. Philadelphia.

The report of the Episcopal Hospital of Philadelphia gives somewhat of a history of the institution since its beginning in 1852. A more detailed report is made up for the year 1916. Many interesting cases are cited in detail, and a number of illustrations accompany the case citations. The report is nicely made up and bound.

**THE PRACTICAL MEDICINE SERIES**, comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume III, The Eye, Ear, Nose and Throat, edited by Casey A. Wood, C. M., M. D., D. C. L.; Albert H. Andrews, M. D.; George E. Shambaugh, M. D. Series 1917. Chicago, The Year Book Publishers, 608 South Dearborn street.

No one can appreciate the value of these series so much as when endeavoring to look up the latest advances in medicine or surgery in his library and finds his book obsolete. The owners of these series, as they appear from time to time, will be fully conversant of all that has occurred in the preceding year which is of value in the practice of medicine. Almost all the abstracts are extensive enough to make them of genuine worth, and with the references they place one in command of the latest advances.

The present volume on the Eye, Ear, Nose and Throat fully complies to all that is expected of it, the editors being eminently qualified in their various departments.



# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. XXXII

CHICAGO, ILL., SEPTEMBER, 1917

No. 3

## Original Articles

### THE TREATMENT OF CATARRHAL DEAFNESS \*

M. F. ARBUCKLE, M. D.  
EAST ST. LOUIS, ILL.

The treatment of middle ear deafness, as the treatment of most diseases, must depend upon the cause. Usually when the cause is removed the deafness will be relieved. Nearly always the etiological factors are found in affections of the eustachian tube in some part or other, and, not infrequently, in diseases in the immediate neighboring district. We must also remember that certain constitutional diseases as syphilis, anemia, constipation, so-called lymphatic diathesis, bad hygienic surroundings, certain occupations and habits, such as the use of alcohol and tobacco to excess, also at times have an important part in the etiology.

In children adenoids cause the trouble in a very large majority of cases and this is easily remedied. Closure of the os tuba in the adult, or narrowing of the lumen of the tube along its course, is a very much more serious matter. While there are many recent cases which will clear up by inflation and the use of bougies, either separately or combined, there are also many old cases who have relief for only a very short period, and finally, after going from one physician to another, give up in despair. These are the ones I wish to speak of particularly.

In a simple, chronic salpingitis, inflation about every second day, preferably with the catheter, frequently is sufficient. When it is not, the use of the bougie, in addition to catheterization, beginning with the smaller size and increasing the caliber as the tube opens up, at intervals of about every fourth day for a few times, after which about once a week usually suffices.

The use of drugs in the tube has not been as successful as in other regions. However, I

believe dionin in a 3 per cent solution about every fourth or fifth day, and some of the silver preparations, probably do some good and should be used. They may be applied directly. Of course, you are all familiar with the method of making these applications. This may keep the patient comfortable, but must be continued indefinitely.

In those cases in which hypertrophy of the lower turbinal is present, with thickening along the lateral wall and around the os tuba, the treatment which I have found to be satisfactory, and the only one with which I have been able to get permanent results, is one devised by Sluder,\* which consists in the use of the galvano cautery, making three incisions on the posterior end of the turbinal, one of which extends back to the anterior lip of the os tuba. The cavernous tissue covering the tip of the turbinate is destroyed. The electrode is made of two naked copper wires with the usual plain platino-iridium tip, and covered by adhesive plaster along the shank after it has been shaped as desired. The tip is bent into the shape of a fish hook, and with the aid of a palate retractor and a large postnasal mirror, which serves both as a mirror and as a tongue depressor, the operation is done in three steps. First, a line beginning about 1.00 to 1.25 cm. from the posterior end in the middle and extending backward with a downward curve, through the dependent part of the cavernous tissue, to the tip. From the same point a line is made back through the middle of the body to the posterior tip and extending along the lateral wall back to the anterior lip of the tube. The upper curved incision starts from the same point as the others, extending backward with an upward curve, and joins the second and first lines at the tip. The instrument is then removed, and if the cauterization is required for breathing purposes the operation is completed from the front by using a straight electrode, the tip of which can be shaped so as to remove much or little of the cavernous tissue of the turbinate, as is required in the judg-

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

\*A galvanic cautery operation for the lower turbinate. Sluder: Laryngoscope, 1916.

ment of the surgeon. The nose is then closed with cotton during the day for a few days and removed at night, without any other treatment. It requires from 3 to 6 months—frequently the latter—to begin to get results, but the results are usually satisfactory and permanent.

In studying the anatomy of the tube, we find in that portion of the mucosa which lines the cartilaginous part of the tube many glands and lymph nodes.

This part of the tube is in close relation with the sphenoid sinus when it extends far down in the pterygoid process—sometimes being separated by bone as thick only as egg shell. The fibres of the tensor veli palatini muscle vary in thickness and height of origin, and when they do not extend well up into the scaphoid fossa and along the tube, or when they are unusually thin, the walls of the tube and the sinus are approximated accordingly.

Given a case with such anatomical settings, plus a sphenoid sinus suppuration, and you will readily see that extension by contiguity will take place if the inflammatory condition becomes chronic. The treatment is, of course, directed toward relief of the sinus suppuration.

There is another class of cases in which closure of the tube is due to crippling the nerve supply, through an involvement of the nasal ganglion and consequent failure of action of the tensor veli palatini and levator veli palatini muscles. This is more or less periodic, coming on with ganglion pain, and the duration depends upon the degree of ganglionic involvement. This is relieved by injection of the ganglion.

#### DISCUSSION (ABSTRACT)

DR. I. M. MILLER (Kewanee) thought that while it is always due to some inflamed condition or stenosis of the eustachian tube, there may be secondary causes. He has noticed many times that the side the septum is deflected on will have catarrhal deafness, or in some instances, the deafness will appear with an abnormal condition of either of the turbinates.

If he can't get results with five or six inflations, he considers the prognosis is bad.

DR. BECK (of Chicago) noted two especially interesting points in the paper; one, the anatomical relation between the sphenoid sinus and the eustachian tube; the other, the affection of the ganglion and the treatment to the ganglion to relieve these conditions.

DR. PIERCE (of Chicago) found that tubal affection

is due, in almost every case, to disease elsewhere in the nose or throat, and that the base of the pathological changes which take place in the cavum is insufficient ventilation, resulting in peremia, thickenings about the delicate conduction apparatus in the cavum; adhesions formed probably in many cases immediately, so that the prognosis of so-called tubal catarrh should be given with very great care in every case.

After these dislocations have occurred for any length of time, they are permanent, and when they are permanent, of course, it makes no difference what we do, whether it is removal of adenoids, of turbinated bodies or treatment of ganglion. It is a purely mechanical matter, and those obstructions to hearing so-called, obstructions to the tube, although they have been removed, have very little effect on the pathological changes which have taken place in this delicate, sound-conducting apparatus.

DR. CORWIN (of Chicago) would hesitate about using bougies or any mechanical devices, even the catheter, except in a very delicate way about the eustachian tube in any condition bordering on acuteness. The milder our treatment, the better, with active elimination and mild emollient treatment, in those early stages of acute catarrhal conditions, realizing that it is ventilation, drainage, that we are after. He has had a good deal of satisfaction in using very small doses, say, one five-hundredth or even less, of atropin in combination with phenacetin and other things, to get a slow, gradual dryness of that early stage of acute deafness with a lot of secretion that complicate these cases.

DR. HOLINGER (of Chicago) emphasized the prognosis in acute as well as chronic cases. The histories of these patients is nearly uniform—"I have been hard of hearing for the last four or five years." There is hardly ever a case that we get much earlier. Thus old adhesions in the middle ear with retraction of the membrane give a bad prognosis. But the common idea of the general public that a case of hard hearing is an incurable disease we should change carefully and systematically.

In treating the chronic hypertrophies of the lower turbinates—a very frequent cause for the acute and sub-acute cases of catarrhal deafness—he has discarded the galvano cautery on account of the reaction. He frequently amputated the free end of the lower turbinate, and the result on the deafness is quick, gratifying, complete.

DR. STEIN (of Chicago) insists upon a thorough inspection of the nasopharynx, so as to relieve any condition that may be present there, especially conditions in the fossa sigmoidea, liberating that with my finger, and thereby possibly improving a condition that is a considerable factor in provoking and keeping up the catarrhal condition.

DR. OSTROM (of Rock Island) has used the cauter-



ization as advised without affecting the patient's hearing after permanent changes have taken place.

DR. ANDREW: (of Chicago) noted conditions in the nose that have their influence upon the mucosa lining the eustachian tube through the nerve system and not through the extension of contiguity of tissue. Thus irritations in the nose or throat may produce a swelling at some distance from the part irritated. For instance, in closing of the eustachian tubes temporarily, or if the conditions last for any length of time, it may produce retrograde changes in the way of atrophy.

DR. ARBUCKLE (closing the discussion): I neglected to pass some plates which I had which are drawings from the cross section which showed the relation of the eustachian tube to the sphenoid sinus in the class of cases which I mentioned. The tube has a bristle inserted in the opening. Now, there are two papers also that I wanted to mention and which I forgot to do. One of these is by Dr. Dixon in Oklahoma City, in which he describes the method of making local applications to the eustachian tube with the aid of the Holmes pharyngoscope. I have been looking for another paper—I don't recall the name of the doctor who wrote it—in which the cauterization was done after the method described and in which four punctures, so to speak, were made around the eustachian tube. I thought that somebody in Chicago wrote that paper. I haven't been able to find it, at any rate, and I haven't had a chance to use either one of these methods, so I can't say anything about them.

Dr. Holinger says he gets disagreeable reaction after the cautery. I have never had anybody complain of reaction. I have never had any trouble with it. After the amputation of the posterior end, I have had one or two bleed a good deal. I have never had anything of that sort happen with the cautery. Of course, the post-nasal cautery is not an easy thing to do. It is not as easy to do as it is to cauterize a turbinal from the front, but I have never tackled one of them so far that I didn't get done. Sometimes it is a little hard to control a patient, but if the palate and the pharynx are well cocaineized, it is not impossible. There is one suggestion in regard to your failure to get results that I thought I would suggest—do you destroy the posterior end of the turbinal?

DR. OSTROM: No.

DR. ARBUCKLE: There are three incisions made with this method I spoke of. Probably there is a good deal more destruction of tissues, a good deal more scar formation than you have. Dr. Andrews has mentioned swelling in other regions and right in the neighborhood of where the nerve is affected. I think the deafness caused by sphenopalatine ganglion neuralgia probably comes as an inhibition of the motor fibers through the irritation of the sensory fibers in the ganglion, because the thing comes and goes with the pain. When the ganglion is cocaineized, the deafness will clear up temporarily, and when the ganglion pain clears up, the deafness will clear up very frequently without any appearance of inflammation.

## WHAT THE STATE CAN DO TO PREVENT BLINDNESS\*

WILLIS O. NANCE, M. D.,

Consulting Oculist to Cook County Hospital and the Illinois Charitable Eye and Ear Infirmary; Chairman City Council Committee on Public Health.

CHICAGO.

It is indeed gratifying to those who have given attention to the subject of the prevention of blindness to note the continued interest—yes, the accelerated interest—manifested in this subject the past few years by public health officials in many parts of our country. Much of this activity has doubtless been largely stimulated by the very excellent support given the movement by the National Committee for the Prevention of Blindness and its several state units, the American Medical Association, through its specially appointed committee, state medical associations and industrial corporation activities. The subject of this paper will permit me to speak only of the work done and that which can be done by governmental agencies. By the word "state" I do not allude to our own commonwealth but to the more general application of the term, "governmental," which would include national, state, county and municipal activities.

The state has almost unlimited powers if properly employed, to bring about stupendous results in the prevention of blindness. The power to enact and enforce intelligent and effective laws is one of the great levers it possesses and perhaps as important or more so is the facility at its command for spreading the gospel of education. The latter is a very potent factor in law enforcement as every public official knows. My experience for several years as a member of the law-making body of one of our large cities has demonstrated to me positively and unequivocally that the mere passage of laws and ordinances is by no means all that is necessary to effect desired results. This applies especially to health laws. Education of the public and the securing if possible the public's sympathy and co-operation in law enforcement is a decided asset. Some six years ago when I secured the passage of an ordinance in the city of Chicago eliminating the common towel in public places—one of the first laws of that kind ever passed by any municipality if not the first—a hue and cry went up against its enforcement by many firms and corporations

\*Read at the 67th annual meeting of the Illinois State Medical Society, at Bloomington, May 9, 1917.

who were affected. They ridiculed its provisions and sought to invalidate its purposes. But with the publicity given the ordinance and its relation to the public health and its adoption by most large cities of the country and by the legislatures of a good proportion of the states, sentiment has entirely changed and few if any of the enlightened public today would resort to the old order of things. For awhile after the adoption of the ordinance the railroads entering Chicago would remove the roller towels hanging in their cars as they reached the city and again replace them as they left the corporate limits, but who today with the campaigns of education that have been carried on the past few years in health matters believes that for one moment, if the law was repealed, that they would resort to the old order of things? People for generations had been carelessly using that eye disease transmitting relic of filth with its train of suffering and anguish, but not until a law was passed relegating it to the scrap heap was the attention of the general public directed to its danger.

Ophthalmologists had ever recognized its dangers, had preached assiduously against its retention, but without satisfactory definite results for the reason that their preachments had not been given the necessary publicity. So I say, gentlemen, that the mere passage of laws will not always correct evils and bring about the intended results but frequently the adoption of measures, backed up by publicity and the strong arm of the state in their enforcement will accomplish all that is desired.

Of course, every oculist knows that the chief cause of preventable blindness is ophthalmia neonatorum and all are familiar with the legislation that has been adopted in this and other states in the past few years looking to its prevention. We are all also familiar with and are gratified at the earnest co-operation that has been manifested by health department officials in the enforcement of this legislation. In Chicago and in the state at large, public health officials are co-operating conscientiously with those of the Society for the Prevention of Blindness in an effort to check this serious disease and with unusually happy results. In other states where laws have been in effect for a longer period and where they have been enforced, the disease has been materially reduced. The medical profession

is today paying more attention to the employment of the Credé method of prophylaxis than ever before and the public itself is fairly well familiar with its use and efficiency. What is needed today, I believe, is a more effective regulation of the practice of midwifery and I trust that this may more certainly be brought about in the near future. Immediate compulsory reporting of all births to local health officers would also do much in controlling the disease.

Great strides have been made during the past few years by public health officials in the fight against trachoma. Not only have the health departments of New York and Philadelphia and the Illinois board shown commendable activity along this line but the Federal government itself, in addition to maintaining supervision over immigrants entering this country, has busied itself in the actual treatment of many of these cases in isolated places, namely, in Kentucky, Tennessee, Alabama and other states. In addition to the treating of some 19,000 cases during the past year in these localities, six mountain hospitals have been established by the Public Health Service for the free treatment of the diseases and clinics have been established at which instruction has been freely furnished gratis to physicians. The national government can do much to prevent blindness by a continuation of this service. Better regulation of housing by the state, an educative campaign illustrating the contagiousness and serious consequences of the disease and the importance of preventive measures in certain parts of our own state where the disease has been common for a generation, the work to be carried on by the public health officer in conjunction with the medical profession would result in the prevention of considerable blindness.

Industrial accidents are still responsible for too many cases of blindness. The large number of occupational accidents is appalling. During the past year in the state of New York five persons were killed, twenty-one permanently crippled or maimed and 174 suffered serious temporary injuries on an average every working day. It is authoritatively stated that in all the wars of a hundred years, the number killed, wounded or permanently maimed is not nearly equal to the grim toll taken by industry in the same period. It can be truly said that much progress has been made in the prevention of eye accidents in the



industries during the past few years. In the shops of one large steel concern, the American Steel Foundries, the number of eye accidents was reduced 75 per cent in two years by the use of protective goggles. Most of the large corporations voluntarily furnish such protectives and do their utmost to encourage their use by employees. The state should require employers to furnish proper goggles and should penalize the employee in awarding compensation in case of injury sustained if it is shown the injured employee refused to wear the safety device. This law is said to be in force in Wisconsin. It would seem that the general adoption of such a statute would stimulate the wearing of goggles by employees.

Chip guards on lathes and other machines for the protection of near by employees as well as the operator should be provided where indications warrant it.

Laws for the better protection of the eyes of those engaged in mining might well be adopted and enforced. Protection against injury from explosions and better lighting would tend to reduce the number of those whose eyes are destroyed or permanently diseased in this industry.

The practice of removal of foreign bodies from the eye by fellow workmen should not only be discountenanced but positively forbidden. This practice should be specifically prohibited by law and the law should provide that a reduction in the employee's compensation should apply in case of award for damages. A wise provision of law might include the prominent posting of such information in the shops where all employees might become conversant with such provisions.

Sufficient and properly directed illumination of shops will do much to prevent industrial accidents of the eye and public officials might well direct their activities in a careful study of the shop lighting problem and to seeing that the illumination of shops is as near perfect as possible. Frank Allport estimates that more than 25 per cent of shop accidents are due to poor illumination. He concludes that proper lighting preserves eyesight, improves the efficiency of labor, increases the manufactured output and profits, is economical and cheap and decreases accidents.

Ocular accidents to children by the careless use of toys, air-rifles, scissors, knives, etc., are not occurring, in my experience, with the same degree of frequency as formerly. Parents, as a

rule, I believe, are becoming more particular about the character of toys allowed their children. The sale of the air-rifle, responsible for the loss of many eyes, should not be permitted. There is really no excuse for its existence and it is a decidedly dangerous instrument in the hands of children. The Chicago city council last year passed an ordinance prohibiting its sale; this prohibition should be made state wide. The dangerous "water-core" golf ball should also receive the legislative taboo.

A more strict regulation of the sale and use of wood alcohol would reduce the number of cases of preventable blindness. The publicity given to some serious instance of poisoning by this preparation recently have caused the legislatures of several states, including our own, to enact more stringent laws governing its handling and the more energetic enforcement of present laws. In one state where the law was violated and several deaths and a number of cases of blindness resulted the druggist who sold the poison was sentenced to prison.

A study of the effects of the employment of wood alcohol in the industries, the investigation to be conducted under the supervision of the Federal government, has been urged by resolution of the board of directors of the National Committee for the Prevention of Blindness. It is to be hoped that this authoritative and disinterested investigation will be made and that it will result in federal legislation and enforcement of statutes backed by the strong arm of our national government.

It is gratifying to note the more active interest that is being paid on the part of the state to the hygiene of the school room. Every oculist knows the importance of intelligent lighting, proper posture, appropriate print and suitable grading of pupils in their intimate relation to defective eyesight. The prevalence of defective eyes and ocular diseases among children is shown in the recently published report of the Chicago Health Department which shows that in 1916 there were 13,984 children in the public schools of that city whose eyes needed expert care and attention. Much can be done by public officials in bettering the condition of the school rooms throughout the state and by seeking the co-operation of parents in giving prompt attention to ocular defects in early childhood.

With our nation now at war, the state, that is, the government, can and doubtless will give careful consideration to the prevention of injuries to the eye incident to warfare. Morax and Moreau who made a statistical investigation into the nature and mode of action of the projectiles which injure the visual apparatus, with a view to devising means for its protection conclude (abstract in *The British Journal of Ophthalmology*, February, 1917) that: "although no practicable protective apparatus could be of use in stopping bullets or large splinters of shell, almost half the ocular injuries in war are caused by small bodies which could be stopped by some sort of gauze shield which might also stop spent, or almost spent, fragments of medium size. Unfortunately, such an apparatus would more or less diminish the visual acuity of the soldier wearing it, but a shade could be worn protecting the tempero-orbito-nasal region and perforated by an opening a little larger than the cornea which would reduce the vulnerable zone by about three-quarters."

In the brief time allotted the presentation of this paper I have endeavored to concisely point out some of the things the governmental agencies can do to prevent blindness. Their part in this humane and worthy movement is a highly important one. Backed by the strong arm of authority many accomplishments can be brought about that it would be quite impossible to bring to a completion in any other way. Education of the public and a close co-operation between governmental officials, be they Federal, state, county or municipal, the medical profession and the public will materially strengthen the good work for the prevention of blindness. In discussing the control and elimination of communicable diseases in Illinois, Dr. C. St. Clair Drake, the director of public health, at the Champaign meeting of the State Society last year very truly said: "You must deal more with the people than with the community authorities. You must resort to popular education, for in the final analysis education is the 85 per cent effective weapon in the prevention of preventable disease."

Let the city councils, state legislatures and our national legislature continue to put upon the statute books intelligent laws, and have our executives enforce them, but let them also carry on liberally their educational propaganda direct to

the people. The importance of this feature of law enforcement is being more recognized every year by the immense amount of publicity work being done. All credit to the work of the various committees for the prevention of blindness, the American Medical Association, the National Committee, the Illinois Society and the work of the state and local departments of health. Let us give them all our unreserved support and co-operation in their well-directed efforts to save the eyesight of our citizens.

30 North Michigan Avenue.

#### DISCUSSION (ABSTRACT)

DR. WESLEY HAMILTON PECK (Chicago) advocated the enactment of well-considered legislation supported by publicity for the prevention of communicable eye diseases.

The illumination in the factories should not be too intense, but well directed in the case of lathes, and the men should be placed in the proper position.

Many skilled workmen should be obliged to wear corrective lenses. This matter is receiving increased attention since the enactment of the compensation laws.

Large placards should be placed around the factories warning the men against attempting to remove these foreign bodies by licking them out with their tongues and taking them out with dirty fingers, dirty handkerchiefs and frequently toothpicks that they have used when they have pyorrhea.

An enormous lot of ophthalmia neonatorum is the result of ignorant management of implements by midwives.

Druggists should be required to place a distinct label on each bottle stating the dangerous character of wood alcohol.

One of the most gratifying advances that has been made in this state in the last twenty-five years has been in regard to abolishing the foolish Fourth of July fireworks.

DR. TIVNEN: We have with us today Miss Van Blarcom, who is secretary of the Illinois Society for the Prevention of Blindness. I am sure we would be very much pleased if Miss Van Blarcom would address us.

MISS VAN BLARCOM: Dr. Nance's paper has so thoroughly covered the field of the work for the prevention of blindness that there is really very little more to say except perhaps to explain that the work of the lay society which I represent has for its sole object that of bringing together the men who are capable of treating eye cases and the eye sufferers themselves. As Dr. Nance has said, about half of the people who are blind are blind from preventable causes, and excepting in a few instances they go blind because they have either not had medical treatment at all or inadequate treatment or the medical care had not been given speedily enough. Our object is to



secure medical care which is adequate and prompt for eye sufferers. That really is the sum and substance of our effort.

In order to accomplish this, we must have support through legislative action and various official regulations. In addition to that, we are, of course, absolutely dependent upon public opinion. However, public opinion doesn't always bring care, unless we can back up our recommendations which are conveyed through the channels of publicity work.

I have in mind, for instance, a very recent case which came under our observation in Chicago which exemplifies the importance of not only educational work but legal backing. One of the oculists in Chicago referred to our society a baby suffering from ophthalmia neonatorum, which, in his opinion, was in danger of going blind very speedily unless hospital care was given. The doctor felt that the conditions in the home were such that he couldn't possibly do justice to the child. He hadn't time to labor with these people, who were foreigners, and asked if our society would see to it that the baby got into the hospital. We take up such cases in the frame of mind that prompted the man to carry the message to Garcia; if the babies can be gotten into the hospital, we get them in somehow.

We found it quite hard to labor with the parents. They were of the opinion that if they continued to bathe the eyes with mother's milk or used the mother's wedding ring to stroke the upper lid, there was no question that the baby would come out all right. We realized that the situation was rather serious, and in the end we are forced to the unpleasant duty of going to court, swearing out warrants for the arrest of these parents and taking the baby out of their hands under compulsion. In that case, no amount of education would have saved that baby from blindness, but, backed up by the arm of the law, we were able to get for that child the necessary treatment.

In connection with school children, we are confronted with very much the same sort of situations, and you may be interested to know that there is a steadily increasing number of seriously defective eyes among the school children referred to our society for the purpose of securing adequate medical attention which the parents are not willing to get.

The recent legislation for the preservation of eyesight in Illinois, of course, has given the lay workers a very powerful weapon. The most important one, in my mind, is the requirement that all cases of baby sore eyes be reported to the local department of health. Of course, for such men as are here this is a matter of no importance. The patients in your care are no better off whether the eyes are reported to the Department of Health or not, but in the midwife cases, and the cases that are in the hands sometimes of the general practitioners who don't always preserve the ideals of the medical profession, the baby is much more apt to get satisfactory care if there is an official record of this case, and, in the midwife cases, of course, it is possible for us to go in and

resort to high-handed methods and demand that the baby be given a chance by having prompt medical care.

Dr. Nance has referred to the wood alcohol question, and I don't know whether he has heard of the law that has recently gone through the legislative body of the state. I got word just the other day that a law requiring that all wood alcohol in the state of Illinois and wood alcohol under any name and all preparations containing wood alcohol should bear the same label, that is, a poison label with the skull and cross-bones. We feel that if this is backed up by education and the prosecution of offenders, it will be the means of preventing a good deal of blindness.

The midwife question is certainly a very acute one, and you may be still further interested to know that although the effects of bad midwifery are much more far-reaching than the destruction of infant eye-sight, it seems to devolve upon the prevention of blindness workers to concern themselves with the regulation of midwives, and so, with the very wonderful cooperation of the State Board of Health, we are working toward what we consider a fairly comprehensive plan for the control of these practitioners. We feel, first, that they should be trained. They should be brought up to a minimum training if they are to be allowed to assume their very grave responsibilities. They should give evidence of this training by passing a State Board examination, and their work, after license, should be limited to attendance upon normal cases only. They should be required to call physicians when there is any deviation from the normal, and they should give nursing care to the mothers, teach the mothers how to take care of their own babies and give such care as the visiting nurses give. The State Department already examines midwives. It is just now publishing a book of rules which sharply limits the work of these women, and we are supporting Dr. Drake in an application for an appropriation which will make possible the employment of midwife supervisors who will go about watching the work of these women and seeing that they follow the rules adopted by the State Department of Health. This will result in debarring from practice those who are obviously unfit, and, although we feel that it is going to accomplish a good deal more than the saving of babies from going blind, it is going to be one great help in the preservation of the eye-sight of infants.

After we have gotten baby sore eyes reported, all cases cared for, wood alcohol labeled and failure to do so reported, school children looked after, we are certainly going to do away with half of the inhabitants of the State Blind Asylum at Jacksonville. The support of legislative control and the official bodies, and, of course, the medical profession spells success in that work.

DR. OSTROM (of Rock Island) did not think there was a man in the room who would go into a boiler factory or into some of our big factories and stay inside of the boiler in July and August with a temperature away up and keep one of those unbearable

goggles on his face under any condition and do it day after day. We have men in this organization like Dr. Allport, Dr. Tivnen, Dr. Nance, who, he believes, could have enough influence with our manufacturers of goggles to help effect a change. The goggles should be made so that they can be put on comfortably, say, with a cylinder bridge, solid enough and yet not too heavy.

DR. BURKHARDT (of Effingham) recalled that four or five years ago he presented a paper before the Chicago Ophthalmological Society upon "Ophthalmia Neonatorum" and that the Society appointed a committee to take up the matter and stimulate a propaganda along the lines that were brought out in this paper. Since that time the State Board of Health has placed more stress upon the prevention of the condition which produces a great deal of our blindness. He advocated legislation that will make it practically criminal on the part of the attending physician or midwife who does not make use of the proper means for preventing ophthalmia.

DR. SHERMAN (of Aurora) noted the irritation of the eyes from the use of bright lights on automobiles.

DR. TIVNEN: Dr. Burkhardt has referred to the committee appointed by the Chicago Ophthalmological Society some time ago, when he read a paper, a symposium on the subject, in conjunction with the Chicago Medical Society. I had the honor of being the chairman of that committee appointed by the Ophthalmological Society. We endeavored to do some work, but found the problem a very difficult one indeed, there are so many angles to it. It is splendid that we have in Chicago now a society known as the Illinois Society for the Prevention of Blindness which have such an efficient secretary as Miss Van Blarcom to take up this work. She is devoting her entire time to it, and I feel that every eye society should cooperate with her in every way they can and in the same sense, in order that the work may be systematized. I would suggest that her society cooperate also with this body and with the Chicago Ophthalmological Society to the end when any important measures are under way that there would be a consultation and conference between the secretary and officers of this section, who represent the medical profession of the entire state, and also with the Chicago Ophthalmological Society in Chicago who represent not only the men in this special line of work in Chicago but in many of surrounding towns who are members of that body, that they should all enter into conference on any legislation or any particular plans that are going to be put through. Miss Van Blarcom, of course, will have the cooperation of every medical man and all his influence to bring this work to a successful conclusion. I say that because the angles of this problem are far-reaching, and many times it requires considerable tact and diplomacy, so that results may be accomplished in the end and nobody should be hurt.

MISS VAN BLARCOM: I am so heartily in accord with what Dr. Tivnen has said that I am really very

grateful to him for having said that, and I should like to explain that while our society is only a year old, the Ophthalmological Society in Chicago has already adopted resolutions pledging itself to work with us and to expect a reciprocal action from our society, and I can only stress what I tried to intimate, that we consider this your work. It is purely our function to bring eye sufferers under medical care, and our various courses are directed entirely with that in mind, and we feel so strongly that it is necessary for us to be one with the medical profession that the Chicago Medical Society is going to devote an evening, I think it is to be May 23d, at which this entire question of the lay work for the prevention of blindness will be discussed before the body of the Chicago Medical Society, in order that not only the eye men but the general practitioners and all of the doctors connected with that body will understand exactly what the hope of our society is. If it were in order for you to consider such a thing, it would be very deeply appreciated by us, if this section would feel that we are a sort of a subsidiary to you in all of our work, and we should like to have you go on record as wishing not only—it isn't that you work with us, but that we work with you. We are simply a supporting arm, to be a link between the medical profession and the uninformed lay public, and we should like to feel that you did have sufficient concern about our methods to confer with us and to take such action as you thought necessary to bring about a very close relation. I don't mean cooperation on paper and just here. I would like to pay a tribute to the medical profession in Chicago for their attitude toward this new work. We felt that we might perhaps be criticized by some of the men for following up a number of their cases, which we have done, but without a single exception, during these past fourteen months, every doctor in Chicago that we have come in contact with has been more than cordial in his attitude and has made it possible for us to help him, and, of course, that is what we wanted to do.

DR. PECK (of Chicago): I make a motion that the the Chair appoint a committee of three to draft a resolution in accordance with Miss Van Blarcom's suggestion and report it back to this section before the day closes for the consideration of the Society. (The motion was seconded by Dr. Nance and unanimously carried.)

DR. TIVNEN: I will appoint the committee just a little later.

DR. NANCE (of Chicago) (closing discussion): I want to thank the Society for the generous discussion of this paper. There is just one point that I want to refer to, and that is the point that was brought up by Dr. Ostrom, of Rock Island, relative to the protective goggles in use in industrial plants. I realize that what he says is absolutely correct. The one trouble in foundries and plants has been that the foremen will say, "Yes, we furnish protective goggles to our employes, but we cannot get them to wear them."



The explanation as to why the employes do not wear them is very properly given by Dr. Ostrom.

Now, a great deal can be done along this line if the gentlemen who are present today, who are doing work for these various corporations throughout the state will simply take the matter up with the foremen or preferably with the general manager of the corporation and discuss the subject with him. I know that in two instances I have had the matter up, the very matter that Dr. Ostrom alludes to, with the general managers of two corporations, calling attention to the fact that it is unjust, it isn't right to ask employes to use goggles promiscuously without any attempt whatever to fit them so that they will be comfortable. If these goggles are furnished to the employes, liberally and so that they fit with a degree of comfort, then if the employe does not wear them under those circumstances, I favor a law that will penalize the employe in case of an award for compensation for damages, and due notice being given by a posting of such a notice upon the place in the shops. That will have a tendency, I believe, to induce the employe to wear these protectors.

DR. TIVNEN: I will appoint on the committee suggested by Dr. Peck: Dr. Nance, Dr. Peck and Dr. Burkhardt and ask them to confer and report to us at the opening of the afternoon session, or sooner, if, they can.

## A NEW METHOD OF DEALING WITH THE NASAL SEPTUM\*

JOHN A. CAVANAUGH, M. D.,  
CHICAGO.

Science is constantly on the alert for improvements and always ready to accept anything that will show progress over old ideas. I believe I have succeeded in developing a method of operating upon the deformed nasal septum that will appeal to all who try it.

I will not burden you with the embryology, physiology, anatomy or causes of septal deformities, as I have nothing new to offer other than can be found in books and journals dealing with these subjects. However, I firmly believe the deformities of this anatomical structure cannot be dealt with unless one masters the anatomical field in which he works, otherwise there will be many failures.

As this paper is concerned only with my operation upon septal deformities it is not necessary to speak of the many methods advanced by other colleagues except to show why my method is a step forward to something better.

I irrigate the nasal passage with a 1 per cent solution of the official 10 per cent Tincture of Iodine, applying to the obstructed nostril a glass nasal bulb attached to a douche bag. Have the patient bend well over, holding the bag just high enough to have the solution flow over the posterior end of the septum and return through the other nostril, but never high enough to flood the post nasal space. Apply a 1 to 1,000 adrenaline chlorid over both sides of the septum with a cotton applicator, followed by a 10 per cent cocaine solution, until anesthesia is complete, then making a second application of adrenaline chlorid to the area to be incised.

The incision is made on the side of the deflection or convexity, just posterior to the mucocutaneous junction, carrying it from above downward through the mucous membrane to the cartilage and bone and onto the floor of the nasal cavity. This incision can be varied to suit the individual case but up to the present I have not found it necessary. Having made the incision it is an easy task to elevate the mucous membrane with the perichondrium by a Freer elevator back onto the ethmoid plate and down to the apex of the ridge if one be present. If the ridge be absent carry the elevation of the mucous membrane down to the floor or below the deflected area. Should a thickening be present opposite the anterior ends of the middle turbinates carry the elevation of the mucous membrane above it.

The cartilage now being freed from the mucous membrane on the convex side, I pass my cartilage shave (Fig. 1) through the incision back to the ethmoid plate, making pressure toward the cartilage and drawing the instrument along the lower part of the cartilage to the initial incision, and I find a narrow strip of cartilage removed, leaving the perichondrium of the mucous membrane of the opposite side exposed.

Should the obstruction be due to the deflection of the cartilage, introduce the septum shave in a like manner at the bulging area and make a similar groove through the bulging center parallel with the initial groove. If the perpendicular plate of the ethmoid has shared in this deflection, I elevate the mucous membrane and periosteum from the ethmoid plate beyond the deflected area if I have not already done so, and introduce my septum forceps with a roughened surface on the inner side of one of the blades, Fig. 2.

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

The roughened blade is introduced into the nostril of the mucous membrane elevation and through the incision so as to rest upon the exposed bony ethmoid plate, while the other blade which is smooth passes through the other nostril and rests upon the mucous membrane. In this way one can fracture the ethmoid plate in several places which then can be freely and easily pushed over into the median line.

Where a ridge is present I proceed as before, removing a narrow strip of cartilage with my septum shave from the upper surface of the ridge. Most of these ridges are due to the displaced lower edge of the quadrilateral cartilage; this strip of cartilage left below my septum groove is loosely attached to the perichondrium and easily removed. Should the bone partake in this ridge I make an incision through the periosteum on the upper border of the premaxilla; then introduce the elevator and raise the mucous membrane and periosteum from the ridge and remove with my septum gouge, Fig. 3.

The thickened tuberculum septi can usually be shaved down if the septum shave can be introduced above it. When the tubercle is bony or when I am unable to pass my septum shave above it, I shave off a little of the cartilage below and use my blunt end double edge knife (Fig. 4) to elevate the mucous membrane on the opposite side and make an antero-posterior incision through the cartilage; then I introduce a biting forcep to remove this thickened area.

If only a spur be present, make a vertical incision just anterior to the beginning of the elevation of the spur and elevate with an elevator to the tip of the spur anterior, above and below; then with a blunt *right angle* elevator elevate from behind forward cutting off the cartilaginous tip. I now take my septum gouge (Fig. 3), placing it just anterior to the elevated portion of the spur and an assistant with a mallet drives it through the septum. I hold the instrument so that it travels parallel with the mucous membrane of the opposite side which is separated from the bone as the septum gouge travels, acting as an elevator and removing the spur at the same time.

Having removed all obstructing areas of the cartilaginous or bony septum I now direct my attention to the edges of the incision and if they do not come close together I insert a couple of sutures of No. 0000 catgut on a Killian needle,

drawing the cut surface together, this heals faster and prevents the scabbing which usually occurs when the edges are left separated.

I pack on the side of the operation, with two or three finger cots partially filled with absorbent cotton or with mending tissue splints made in the shape and near the size of the septum. I spread these over the septal surface holding them in place by absorbent cotton applied on the outer side of the tissue. The splints have been soaked in a 1 per cent Iodine solution, and allowed to remain in the nose from 24 to 48 hours, depending upon the amount of deflection to be overcome. Remove the packing, wash with a continuous irrigation of normal salt solution, having the head bent well forward and the pressure of the fluid just sufficient to carry over the posterior end of the septum and flow from the opposite nostril. Never introduce a cotton applicator into the nose at this time; it is liable to traumatize and produce a hematoma. Should the middle turbinate on the concave side be hypertrophied so as to interfere with the septum when pushed back to the median line, the portion interfering should be removed.

I have performed a number of operations using this method with excellent results and no perforations. In one case where a scar the size of a ten-cent piece was present, if the regular operation had been performed, a perforation would result. With my septum shave I was able to correct the deformity without a perforation.

Dr. Tydings of Chicago demonstrated an operation last year which was very ingenious and satisfactory in many cases, but I found the method inadequate to remove the thickened septal tubercle when present, and to remove the bony obstructions posterior to the cartilage.

In conclusion, let me say, the advantage of the operation outlined in this paper are many:

It is easy to do the operation.

It takes less time to perform the operation.

It is practically impossible to have a perforation.

It is impossible for the tip of the nose to drop.

The flapping of the membrane during respiration never occurs.

Age makes no difference in results.

Previous operation as the Ash, Gleason and sawing, will not interfere with this operation.





Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 1—Author's straight septum shave.

Fig. 1-A—Author's right and left septum shave.

Fig. 2—Septum bone forceps.

Fig. 3—Author's septum gouge.

Fig. 4—Author's blunt-end double edge knife.

#### DISCUSSION.

Dr. Oliver Tydings (of Chicago) referred to the operation he presented to the society last year and thought there is room for both operations.

He had occasion to use one of Dr. Cavanaugh's instruments in a case of thick exostosis very high up on the perpendicular plate of the ethmoid and it enabled him to do what he could not do with a pair of forceps of any kind.

Dr. Kahn (of Chicago): I have only a question. I would like to know how Dr. Cavanaugh pushes the cartilage over, or if he takes it up, or what he does with it.

Dr. Cavanaugh: I leave it in and pack afterwards.

Dr. Tydings: There is one point in my method, that you can hold that cartilage absolutely in place. You get one of these ordinary shawl pins and cover the head of it with sealing wax, and you can absolutely, by following out the method I laid down there, keep that cartilage in place, and keep it in place for a week or ten days, if you wanted to.

Dr. Corwin (of Chicago) appreciated both the cuts,

which reminded him of those splendid representations that the late William E. Ballinger used to give in putting forward these operative measures and the instruments.

He confessed that he was guilty of recommending the same sort of procedure a few years ago, not with instruments as good as these or anything like that, but with the ordinary instruments.

Dr. Deal (of Springfield) asked Dr. Cavanaugh what success he has with the injection method for these elevations around sharp projections, injection under the perichondrium for elevation.

Dr. B. F. Andrews (of Chicago) asked the doctor how he cares for the anterior end of the septum that is protruding into the opposite nostril, whether he does anything with it, whether he removes it or tries to replace it in the median line.

Dr. Holinger (of Chicago) made the suggestion that he try to make the forceps lock, like the lock of the old Nagley Obstetrical Forceps. Then he can hold the mucous membrane and perichondrium away from the septum, insert one branch, and do the same thing on the other side and close the forceps afterwards in place. That would avoid the possibility of squeezing parts of the mucous membrane which might become necrotic afterwards.

Dr. Hagler (of Springfield) complimented Dr. Cavanaugh on his great advance in this line of surgery, in that he is practically making a bone insertion, saving the tissues, giving a normal septum instead of taking out large quantities of tissue which should remain there and give support to the septum.

Dr. Bergeron (of Chicago), who assisted at Dr. Cavanaugh's operation yesterday, was particularly impressed with the simplicity of his operation, and particularly so in this, that the patient had a tremendous bony deflection hugging the middle turbinated body, and, after elevating the membranes with these little instruments, was able to resect that part of the septum without perforating the opposite side. He saw the patient following the operation and found that the patient had perfect results, with the septum on a perfectly straight line.

Dr. Cavanaugh (closing the discussion): I surely appreciate the expressions of the various gentlemen in discussing the paper. I realize that I haven't touched on all kinds and shapes of deflections, for the simple reason that you can't do it in ten minutes, but there is no condition of the septum that I know of and have seen that you can't take care of in this way, at the same time preserving the greater part of your septum. I don't think there is any question but that most of you men have seen, after a thorough resection of the septum, removing of the cartilage and the bone, patients complaining of flapping of the membrane. In this operation, there is no flapping of the membrane, practically all of the structure of the septum are retained. Age makes no difference in this operation. You can do this operation in the very young, which many of you object to, claiming that it has an effect upon the development of the nose. The greater part of the nose, or the greater part, rather, of the septum,

is left in, so that if there is any development, as the case advances, in this region, there is nothing to interfere with the progress of that case along its natural and normal lines. I think, leaving a portion of the cartilage that we do here in these types of cases, that there can be no changes.

One of the doctors asked me if I removed the bone. Unless there is a very prominent projection or spur which would extend away out, and then I use the septum gouge which you have seen and elevate only on the one side, but as far as curvatures are concerned, I leave the bone in, cracking it as I have shown you here before.

Dr. Kahn asks if I leave the cartilage in. I leave the cartilage in. You have absolutely no trouble whatsoever in placing that cartilage back, pushing it back from one side to the other. Of course, it depends upon the shape of your deflection and what you have, and all that, as to just how you are going to deal with this cartilage. It will depend upon the shape of a cartilage just how you will deal with that cartilaginous area, but if you have a very marked angle in this region here, we will say, as you sometimes will see, extending out like this instrument does and in that way, then I don't remove this area. I go down in the area of greatest convexity and remove just that area, and then you can push your cartilage back in its original position or in what should be the normal position. I don't remove but very little structure, only the area that will be removed by this septum shave.

Dr. Corwin spoke about the artistic work. I am sorry that I can't lay claim to it, but I can't. I had one of the students do this work for me.

Dr. Deal asks about the injections. I don't use the injections with this method at all. I make my incision, as you see it here, and then elevate with this elevator. In the old method I used to inject. Now, I will make one exception to what I have just said about injection, and that brings up the question Dr. Andrews has asked, how I deal with a case where the cartilage is pushed over in front to one side and bulges over on the other side. I do inject in those cases, because we have to carry the incision down and out on the skin tissue. Where that is done I do inject, but that is only for the purpose of the anesthetizing of the skin surface and not for elevating purposes. Where I make that incision well forward at the anterior part of the cartilage I then elevate on the side of the convexity back in the nasal cavity, not on the concave side, excepting, for instance, we will say this here would represent the bulging on this side and the projection of the anterior part on the other side. My incision is made on the side in which the anterior part of the cartilage is obstructed, and then I elevate back on the side which is bulging, we will say, on this side, from my original incision on the other side. Now, then, I elevate back on the side of the concavity, that is, the side in which this anterior part of the cartilage is obstructing, only to where the cartilage comes to the medial line, not all the way back, just to the area in which the cartilage comes to the medial line, and I will remove, we will say, that part of the cartilage,

leaving the balance of the cartilage here and going back with my septum shave remove, as you see here, on the convex side, without elevating on the concave side.

Now, that leaves support to your nose, while leaving a pillar in there and that great area of cartilage, whereas in many of these cases that most of the men do, where they have that deflection, you remove all that cartilage and bone back as far as the deflected area, and you get the sagging of the nose, or a very lax, flabby condition of the tip of the nose, which you don't get when you remove in this way.

Now, Dr. Holinger spoke about this Kyle's instrument. You will remember that the bone back in this area is very thin. It requires but very little pressure, and in the twenty-five cases that I have already done, I haven't noticed any necrosis, because the pressure is not great enough to cause that, and there is no stripping off of the mucous membrane on the other side. There is just the least little pressure that requires a fracture of certain areas. I don't fracture, as this pressure shows here, but one area. I fracture just a little of the area where the instrument is, and fracture that so that there are probably three or four little fractured areas.

## TREATMENT OF MEMBRANOUS CATARACT \*

H. W. WOODRUFF, M. D.,  
JOLIET, ILL.

Following the ordinary operation for the extraction of cataract, or following iridocyclitis or penetrating injuries, there may result more or less opaque membrane in the pupillary area.

That which follows cataract extraction unless complicated with lens substance, consists of very thin, scarcely visible capsule. This form, if it interferes with vision, is dealt with by the well known operation of diathermy. This operation is usually performed by the use of the Knapp knife needle, Ziegler knife needle or some similar instrument.

My personal choice is the Ziegler instrument brought out by him and described in his operation of the V-shaped iridotomy which is published in the Transactions of the American Medical Association, 1908. While not partial to this operation I am sure the instrument is the most satisfactory for the ordinary needling operation.

Thicker membranes often result from inflammatory deposits from the iris and ciliary body or proliferation of the capsule itself with lens substance remaining unabsorbed.

These dense membranous cataracts, almost like

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



leather in their density, cannot often be successfully treated by the operation of discission. Not only is the operation difficult but is considered dangerous from the traction made upon the iris and ciliary body. For this reason various other methods have been advocated. The membrane may be cut by scissors through a linear incision in the cornea. Punches have also been used to punch out and remove pieces of membrane. These membranous cataracts are usually complicated by adhesions of the iris, so that the iris must be cut together with the membrane.

In volume III of Norris and Oliver's *System of Diseases of the Eye*, Herman Knapp describes an operation for these cases which he states he had used from the beginning of his practice. He calls it Irido-cystectomy and describes it as follows: "Under cocaine anesthesia a Beer's cataract-knife pierces the cornea about three or four millimetres above the lower corneal margin, opposite the scar from the extraction, and transfixes the iris or pupillary pseudo-membrane by an opening three or four millimetres long. The knife is withdrawn. With a blunt hook the lower lip of the iris wound is seized, drawn out of the eye, and abscised close to the cornea. Eye banded. There are scarcely any accidents worth mentioning. The healing is usually prompt, and yields mostly surprisingly good visual results. Among the failures after this operation I have noticed reclosure of the new pupil and suppuration, but they are rare. The infection in the cases of suppuration must be ascribed to the waking up of pyogenic microbes which had entered the eye at the first operation and lain dormant in the inflammatory products of the iris and capsule, for an infection by the instruments can easily be excluded. Infective material may, however, be carried into the eye from the conjunctiva by prolapse of the vitreous, which is not infrequent during this operation."

I have practiced this operation myself for almost twenty years with the same good results mentioned by Knapp. One remarkable case will illustrate.

A number of years ago a young man was admitted to the Eye and Ear Infirmary with a large gumma of the iris in his only remaining eye. Prompt anti-syphilitic treatment produced rapid absorption of the gumma and subsidence of the iritis. It had, however, been present long enough and the inflammatory process had been so severe that the lens had largely become absorbed, leaving in the pupillary membrane a dense

mass consisting of capsule lens substance, inflammatory exudate and adherent iris. The operation of irido-cystectomy gave him perfect vision with his proper correction.

I wish also to report a rather unusual case of similar character which was successfully dealt with by using an operation published in 1912 by Elschnig and called Iridoöctomy.

In August, 1916, a young man, 22 years of age, consulted me regarding the possibility of securing vision in his right eye. A dense white membrane filled the pupil. The iris more or less attached as indicated in the drawing. There were two scars in the cornea, one caused by the entrance of a piece of steel which occurred seven months before. The foreign body had been removed by a skilful operator and afterwards a cataract operation had been performed, which accounted for the linear scar at the upper corneal margin.

Later the patient had claimed entire loss of vision

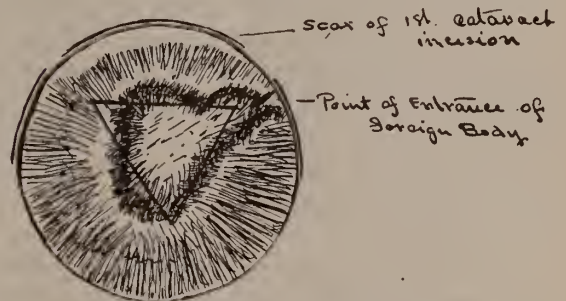


Fig. 1. Elschnig's Iridoöctomy.

and even perception of light and for that reason he had been advised to have the eye enucleated.

When he consulted me he was on his good behavior and readily located the light in any situation in his range of vision. The eye being perfectly quiet and tension normal, I expressed the opinion that there was a chance to improve his vision, perhaps to the extent of his being able to see large objects about the room. The patient being very anxious to have some vision in this eye, although the other eye was normal and having been impressed with the fact that the operation was not without danger, I ventured the operation of discission with the Zeigler knife. This proved inadequate on account of the toughness of the membrane and the eye continuing quiet for about three weeks I performed the Elschnig operation which is described in Vol. IX, p. 6673, of the *American Encyclopedia of Ophthalmology*, as follows: "With a narrow Graefe knife, a puncture and counter puncture are made as for cataract incision. When each cut is about 3 mm. long the knife is withdrawn, DeWecker's scissors are introduced first at one opening and then at the other; the sharp blade being plunged through the iris and capsule and a cut made downward and to the median line; the second cut joining the first. Then a third cut is made horizontally and the

tissue thus isolated, withdrawn by iris forceps." See Figure 1.

There was a considerable loss of fluid vitreous and also a hemorrhage into the anterior chamber which prolonged convalescence about a month, at which time he had a large clear pupil and could readily see large objects in the room. With +11+1c ax 90, his vision was 6/20ths.

In performing any of these operations my experience is that besides the usual preparatory measures, special attention must be given the anesthesia.

These operations often seem to be more painful than the ordinary extraction of cataract, probably on account of the iris involvement with consequent more or less traction upon it. A 10 per cent solution of cocaine is therefore used during fifteen minutes preceding the operation.

An unusual amount of fluid escaping during operation need not be particularly alarming as in the traumatic cases or those previously operated on vitreous may have been lost and this space being occupied by aqueous which will naturally continue to run out during the operation. The essential thing is to operate only on absolutely quiet eyes with normal tension and normal perception and projection.

In conclusion:

The three essential things which I have desired to call attention to are—first, in the ordinary dissection operation, use the Ziegler knife needle. And second, in the dense membranes, good results may be obtained by either the Knapp Irido-cystectomy or the Elschnig Iridoëctomy.

#### DISCUSSION.

Dr. Suker (of Chicago) has found Elschnig's operation very successful in treating it that way, with the exception of using a cataract knife. The vitreous will stand a straight cut with the cataract knife with less danger than with the scissors, and a straight, see-saw motion will cut that cataractous membrane with less danger and damage to the eye as a whole than the scissors.

He has found it a good practice to massage both eyes very briskly for five or six minutes to see if there is any reaction in the eye which is to be operated upon, and all is well if you get none in the opposite eye which is supposed to be healthy. But, if there is a certain amount of reaction in an eye of this kind, please do not touch it.

The majority of cataracts will have a membranous cataract, to a certain extent, irrespective of almost any method you use. Now, if this hyaloid membrane does become a little hazy and opaque, it is best treated with a Ziegler knife. In doing those, you want to be very careful also not to make your incision up high

nor very low down, but preferably in the center. Keep as far away as possible from the ciliary zone. Otherwise you will set up an excessive amount of irritation and you will lose the result that you wish to accomplish.

Even with brilliant results in the beginning, five to ten years later, the vision, instead of being as we had it in the beginning, has dropped down to little better than light perception and projection. With a pupillary membrane occluded by a deposit of this kind the results are invariably poor in the end.

It behooves us then to be very careful, as far as the prognosis is concerned. Give these patients all the way from sixty to eighty grains of urotropin five or six days in advance of the operation, and see that their alimentary canals are absolutely clear and clean. Bacteria will not grow in excessive alkalinity.

As far as the anesthesia is concerned, instead of using the 10 per cent. cocaine, he suggested either a 1 per cent. or 2 per cent. of novocaine hypodermatically or directly after you have made your incision in the eye or substance. You can then handle the work almost with impunity as far as pain is concerned.

Dr. Darling (of Chicago) thought one of the reasons for poor late results is the loss of vitreous at the time of operation.

A method employed in these dense membranous cataracts which tends to save the loss of vitreous is to have the patient seated in a reclining chair so that the highest point in the eye is at the upper part of the limbus. An incision is made through the cornea and down through the iris. Then an incision is made, one blade being put back into the vitreous cavity and a piece of iris is cut out. Having the patient in this position, even when the eyeball collapses, if we don't put much tension on the eye, we will lose very little liquid from the eyeball.

If you put a crystal of cocaine or a solution of cocaine and adrenalin into the anterior chamber after making your primary incision and wait a few minutes, it will be very satisfactory. As a rule we don't wait long enough for the anesthesia of the iris.

Dr. Gradle (of Chicago) noted that practically all of our failures are due to a latent organism within the eyeball itself and not contamination by the instruments and we should make it an invariable rule to be assured of the sterility of the conjunctival sac before we open the eyeball.

In experiments on a hundred cases, making smears and cultures from the same eye, about 45 per cent. of the cases showed organisms by cultural methods, whereas only about 20 or 21 per cent. showed the same organisms by the smears alone. We must make cultures, and we must use fluid cultures to obtain the final results. Incidentally, a little point that we found very useful in the Elschnig Clinic was the removal of the streptococcus by the use of frequent irrigations with a one-five-thousandth solution of oxycyanide of mercury. This proved more efficacious in sterilizing the conjunctival sac than any other form of medication.

Dr. Tivnen has been using the method described



by Dr. Woodruff for some time, and finds it is the most satisfactory for dealing with any particular type of capsular difficulty. The Ziegler knife, as well as the ordinary methods of dissection with a tough capsule exert too dangerous traction on the eye and the opening in quite a number of the cases tends to close. With the De Wecker instrument you get a large opening and a very satisfactory pupil, without much tendency to close.

To avoid the loss of vitreous brought about by the manipulation of the De Wecker instrument the steps of the operation, particularly the opening through which you pass your De Wecker, must be carefully planned and made large enough.

The kind of De Wecker instrument that you use is of very great importance. If the blades are too wide they should be filed down so that they are very fine and the point of the instrument very sharp.

Dr. Woodruff (closing the discussion): The one point in this operation—the use of the De Wecker scissors is to get away from the use of the knife, no matter whether it is the cataract knife or the knife needle, because with them traction is made, and in addition to that the vitreous is more apt to be disturbed by the use of a knife than by the use of scissors, and the same point applies that Dr. Suker made in regard to the sharpness of the knife, to the sharpness of the scissors. Also the same manufacturer is endorsed. He can sharpen a pair of De Wecker scissors just as well as you can sharpen a cataract knife, so that in plunging the scissors through the membrane it is unnecessary to go into the vitreous cavity to that depth that you can hardly help but go when you are using a knife.

I don't know very much about this hyaloid membrane that Dr. Suker speaks about, but I remember the late Dr. Green of Dayton used to occasionally, after his intracapsular operations, talk about needling the hyaloid membrane. It always seemed to me as though the less you disturbed the hyaloid membrane or the vitreous, the better for the eye.

I also have had no difficulty with the 10 per cent. solution of cocaine. Of course these cases are in a certain sense desperate cases anyway, and your anesthesia will certainly aid in keeping your patients absolutely quiet, but, of course, if Dr. Suker's method is of advantage, I am for it. I believe in novocaine most thoroughly and do use it subconjunctivally, but for this particular purpose I haven't used it.

As far as infection and the preparation of the patient is concerned, which Dr. Gradle has referred to, I certainly agree with him in that, and am heartily in favor of any method of examination that will reduce the danger of this operation or any other ocular operation.

In conclusion, I just want to emphasize the fact that your prognosis must certainly be guarded in these cases, because these eyes are eyes which have either been operated upon or have been seriously injured or have been very seriously inflamed, and therefore they are an unknown quantity.

## PRIMARY MASTOIDITIS, WITH REPORT OF A CASE \*

ROBERT SONNENSCHNEIN, M. D.  
CHICAGO.

The question of the primary or secondary nature of any infection or new growth is certainly most interesting. Why one process almost invariably appears primarily in one tissue and why another attacks this same part of the body only secondarily, is a question that cannot always or even very often be satisfactorily determined, at least not at first glance.

Whether there is something specific in the nature of the invading tissue or infectious agent which leads it to attack or infiltrate certain parts is uncertain. Whether, on the other hand, certain conditions such as traumatism either in the form of actual physical injury, as a blow, or subjection of the tissue to sudden changes of temperature or to chemical alteration in the body fluids, may produce, as the late Nicholas Senn so often said, a *locus minoris resistentiae* is also not definitely known. Perhaps a combination of the two factors will account for the phenomenon.

Within the field of oto-laryngology several conditions show a most decided preference for primary or secondary involvement of certain parts or tissues. Permit me the trite statement of a few facts so well known, at least to members of this section.

As regards the larynx for instance, carcinoma is usually a primary process; while tuberculosis is almost invariably secondary to the pulmonary infection. To explain this occurrence is most difficult with reference to the larynx, but in considering the usual infection of the ear our problem is quite simple in most cases. The direct communication between the tympanum and the mastoid cells via the aditus ad antrum allows the easy extension of an otitis media. In fact since these cells really form a part of the middle ear it is no wonder that Politzer made the assertion that in at least 95 per cent. of all cases of acute middle ear abscess there is almost at once infection of the mastoid cells. This does not, however, mean that the process develops into an actual mastoiditis; in fact the involvement subsides in the vast majority of cases.

The acute mastoiditis is thus practically always secondary to an acute otitis media. Un-

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

fortunately, circumstances have prevented the writer from consulting the literature in detail, but we all know that a primary mastoiditis is a very rare occurrence. That the case to be reported is an absolutely bona fide one, I, of course believe, since it apparently had, if you will pardon the pun, all the "ear marks" of one. You will, however, be the judges in the matter.

Mr. H. C. T., aged 34, printer by occupation, came to the office December 16, 1916, with the history of having had a "cold" a short time previously. He complained of pain around and back of the left ear especially at night during past three weeks. No history of tuberculosis or lues. No Wasserman was made.

Examination at this time showed so far as the nose was concerned a septal deviation to the left. The pharyngeal mucosa was injected and the lymphoid tissue hypertrophied. There was some tenderness and swelling of the left cervical lymph glands.

As regards the ear be it said that the membrana tympani was negative, but the left mastoid process was somewhat tender to pressure. Functional testing showed hearing for unaccentuated whisper on the left, that is, the affected ear, at six meters, on right side seven meters. All tuning forks from C<sub>1</sub> (32 v. d.) to c<sup>5</sup> (4096) well heard and Weber not lateralized. In other words, there was apparently no involvement of the middle ear at this time. To relieve pains a carbolyglycerine pack was inserted in the meatus together with 50 per cent. alcohol dressings externally; and the use internally of magnesium salicylate.

The patient came to the office only at irregular intervals, in the meanwhile reporting by 'phone and to the effect that the pains varied greatly—some days being very severe and on others almost absent.

On January 3, 1917, there was some desquamation of the left drum membrane, but no other changes except that the tuning forks were heard a little less loud in left ear than right ear. On January 14, 1917, the pains were very severe so that a wide paracentesis was performed, but without the finding or escape of any purulent secretion from the ear. At this time a few vesicles which had appeared in the external auditory meatus were opened. The Weber now was lateralized in the left ear.

On January 16, 1917, the patient was admitted to the Michael Reese Hospital and blood count showed 18,000 leucocytes. On January 18, there were 18,400, January 20, 14,200.

On admission, the temperature ranged from 97° to 101° and during next week it varied from 98° to 102°, some days not going higher than 99.6°.

On January 21, 1917, there was swelling of the bony meatus and the next day a swelling suddenly appeared over the left mastoid and the hearing dropped to one meter. Dr. Ira Frank saw the patient with me at that time.

A second paracentesis was done, but again without getting any pus. The leucocyte count on this day was 17,600. The next day (January 23), the swelling not having changed, the patient was operated on. On

exposing the left mastoid a small fistula was seen near the posterior meatal wall. A large quantity of pus was found and much destruction in the mastoid process, together with a wide exposure of the dura and lateral sinus. Both of these tissues, however, appeared normal. A spinal puncture, made directly after the operation, showed a negative fluid. Unfortunately the pus from the mastoid was misplaced so no laboratory report was ever had. The leucocyte count began dropping within a few days and reached 10,200 on February 2, the differential showing 56 per cent. neutrophils, 27 small mononuclears, 16 per cent. large mononuclears, 1 per cent. transitionals. The temperature gradually subsided and the patient made an uneventful recovery, leaving the hospital February 4. The wound closed in about seven weeks. On February 5 the hearing for whispered voice was 6 meters and on March 2 and again April 5 it was eight meters. At no time before or after the operation was there any discharge from the ear by way of the external meatus.

That this was a primary mastoiditis seems to me fairly well established by several findings and circumstances.

Despite the fact that when first seen he had for about three (3) weeks suffered, at times very excruciatingly, from pain in region of left mastoid there were no changes in the drum membrane and the hearing was good.

In the second place two wide paracenteses failed to demonstrate any pus in the middle ear.

Had there been any involvement of the tympanic cavity the hearing for whispered voice should have been reduced below 6 meters three or surely five weeks after the beginning of the disease (that is, January 6, 1917). Indeed it was not until January 22, the day that the swelling appeared over the left mastoid that the hearing was suddenly reduced to one meter distance. This was perhaps due to edema of the tympanic mucosa. Had there been even marked hyperemia in the middle ear any time before this, we would, it seems, have expected more change in the hearing power.

How the infection got into the mastoid process it is difficult to say; had it gone by the usual route, surely more tympanic symptoms ought to have appeared.

In conclusion let us say that the history of severe pain for quite a number of weeks with absence of objective signs on the membrana tympani, together with good hearing until a day or so before the operation; and the absence of pus in the middle ear as shown by two negative paracenteses—these facts seem to fairly justify



the diagnosis in this instance as that of one of those rare cases of primary mastoiditis.

29 East Madison Street.

#### DISCUSSION.

Dr. Wright C. Williams (of Chicago) thought that in all of the cases of primary mastoiditis of which he had read there is always a suggestion of trouble in the middle ear, toward the latter part of the process, at least.

Whenever an infection becomes disseminated we may have foci of infection in other parts of the body, and it would not be surprising that once in a while this infection would strike the mastoid. If you get osteomyelitis in the long bones, you get trouble in the gall bladder, trouble in the appendix or other parts, fully as often as you would get such a trouble in the mastoid process. He had never seen what he believed to be a case of primary mastoiditis.

Dr. Holinger did not believe that Dr. Sonnenschein's case is what we might call absolutely proven. The pain that the patient speaks of can just as well be referred to the middle ear as to the mastoid. On the other hand, there is the characteristic picture of osteomyelitis of the mastoid process which has been described over and over again, and an osteomyelitis of the mastoid process certainly might be primary, just as well as it can be primary in the tibia. If there are a few very large cells, or have been a few very large cells in the tip of the mastoid, it is quite possible that a certain amount of pus has been located there and kept up the trouble six or seven weeks, meanwhile causing the necrosis progressing over the greater part of the mastoid, with still not many symptoms from the outside.

Dr. Long (of Chicago) last winter reported a case to the Chicago Otological Society of primary mastoiditis which ended up with phlebitis of the sinus. Pain commenced in the ear five days after a severe coryza. The tympanic membrane was opened and no discharge whatever was found. Six days after that a mastoid operation was performed, and the whole mastoid cell was broken down, the sinus was exposed, and in opening the sinus, there was no clot found.

Dr. Pierce (of Chicago) thought the practical bearing of the whole matter is that we may have destructive inflammation in the mastoid without demonstrable change in the cavum. All infections traveling by way of the eustachian tube through the cavum would either be a surface invasion or an invasion by way of the lymphatics. An infection of the mastoid by way of the surface or by way of the lymphatics that didn't affect the cavum is unthinkable. The only way that it would have a primary infection would be by hematogenous infection, just the same as we might have an osteomyelitis of the cavum, the germs gaining entrance from some foreign quarter.

The cases which are on record have hardly any of them been proven. There is always a hint of some inflammatory process having passed on in the cavum.

Dr. Sonnenschein (closing discussion): I think it is largely the same as the verdict of the Scotch jury, where they said, "Guilty, but not proven." I didn't wish to convey the idea that I was sure of this. In fact, as I stated, I would let you be the judges, and I am satisfied with the judges that I have had. As Dr. Williams and Dr. Holinger said, this case is not proven. The fact that the man never complained of pain in the ear itself would not be conclusive, but in this case all of the pains referred to, at least the first four or five weeks, was in and above and behind the mastoid process.

Dr. Holinger spoke about the fact of large cells being present in the tip as throwing light on the origin of the process. In this case there was a large turbinal cell, but the amount of destruction was so tremendous, the mastoid was almost hollowed out as it sometimes is in a cholesteatoma, with wide exposure of the dura and sinus.

Dr. Pierce has said, and I want to say there is no man in whose judgment I have more confidence, that this is largely an academic question, and that the practical point is simply to know what to do when the occasion arises, as he stated that a great amount of destruction may be present in the mastoid without much tangible evidence in the tympanum.

#### DEPRESSED NASAL DEFORMITIES CORRECTED BY BONE TRANSPLANTATION.\*

L. OSTROM, M. D.,

ROCK ISLAND, ILL.

To my mind the best method of bone transplantation in nasal deformities is that so well worked out by Dr. W. W. Carter. With the aid of an assisting surgeon and a very simple set of instruments the work can be done in a very short time, and in perfect safety.

The nasal cavities are packed with cotton, saturated with paraffin vaseline, beyond the nasal bones. The face and anterior nares are painted with iodine. The incision is made inside the left nostril at a point between the upper and lower cartilage. Carter's subcutaneous knife works fine, but I have used the ordinary Freer's septum knife found in the hands of every rhinologist, and a straight strabismus scissors. For making the pocket toward the tip I sharpened the ordinary right angled dental burnisher. This works a remarkable easy way to the tip and is under perfect control.

The periosteum over the nasal bones is incised about  $\frac{1}{8}$ -inch from the lower edge all the

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



Fig. 1. X-Ray showing bone transplant and photograph showing profile one year after operation.

way from the right to the left side with the ordinary Freer angular knife and the ordinary elevator is then used to elevate the periosteum over each nasal bone first, leaving the fibrous tough attachment over the intranasal suture to the last. This tough fibrous tissue must be cut off close to the bone from each side very carefully so that the periosteum is not torn or split. For this purpose a slightly curved sharp elevator is best, as it follows the bone at all times and does not cut the periosteum above it.

By this time the assisting surgeon (Dr. E. M. Sala worked with me in the cases shown in the photos) has removed a portion of the ninth rib, about 2 inches of bone and one-half inch or more of attached cartilage and has split it. One of the halves is then shaped and properly adjusted into the cavity prepared for it.

By using the blade of a broad hollow retractor 3 inches long to raise up the skin and periosteum the bone transplant can be slipped in place under it and the tip of the nose stretched to admit the other cartilaginous end of the rib.

If the transplant is of right size and shape there is no stretching of the skin or of the intranasal incision. Even pressure is then made on the nose to expel and control the blood.

By this time the assisting surgeon has sewed up the incision made in removing the rib. The chest should be immobilized with adhesive strips so that pain will not be severe during respiration.

The cotton is removed from the nose and a piece of gauze saturated with paraffin vaseline put in the nostril. This is removed in 12-24 hours; no other dressing is needed.

#### DISCUSSION.

Dr. Ostrom (passing illustrations): The results here, I believe, will show that beautiful results can be made, and I have done some where there was no depression at all; simply a little pug nose, where you slip in a piece simply for cosmetic reasons. Considering how safely it can be done, it should be done more often for the sake of beauty, if for no other reason.

Dr. Beck (of Chicago) deplored these operations for beauty's sake only. If you are going to attempt to correct this so-called mental deformity, for that is what they are (a little pug nose, a little twist, etc.), you are going to have endless trouble, as he has had in doing this a few times. People who have their noses



Fig. 2. X-Ray showing bone transplant and photograph showing profile one year after operation.



fixed up for beauty's sake are never satisfied, no matter how fine a result you get. It is always a little bit more or a little bit less than they want it. But in the case of collapsed noses, syphilitic noses, there is a difference. There is a real need for the cosmetic result there.

He finds the *facia lata* the best material for implantation anywhere. It becomes almost like bone and is plastic. It can be adapted in any shape or form. It is an easy proposition to get a piece of fascia.

Dr. Ostrom: All I want to say in conclusion is that I have not operated on any syphilitic noses. I have said nothing about the beauty stuff in the paper at all.

### THE RADICAL MASTOID OPERATION— ITS TERMINATIONS—WITH SPECIAL REFERENCE TO HEARING AND SUPPURATION.\*

CHARLES H. LONG, M. D.,  
CHICAGO.

In dealing with my subject, much that I must say will necessarily be a repetition of facts familiar to every otologist. My apology for this is my desire to present to you some phases of the operation which have appealed strongly to me, and deductions I have drawn from cases in my own personal experience. I shall touch but lightly upon the history of the radical mastoid operation; devoting my remarks chiefly to the emphasis of a few of the initial causes and certain points in the terminations, particularly the hearing and suppuration, with illustrative cases.

The evolution of the mastoid operation properly had its beginnings as early as 1649, when the necessity for the operation was first recognized. In this year we find that Riolanus first opened mastoid cells. The first real operation, however, was performed over two centuries later—in 1858. Van Trösch reports this case in 1861, and theories he expressed at this time furnished a foundation for materially advancing aural surgery. The subsequent investigations and observations by Jacoby of Breslau, 1868, St. John Roosa, Orna Greene, Schwartze in 1885, Küster in 1889, Stacke in 1891, with various recent modifications have brought the radical mastoid operation for chronic middle ear suppuration to what it is today. Thomas J. Harris states that the radical operation applied to the ear means, as elsewhere in the body, an operation for the radical or complete removal of all disease. As to what extent the operation accomplishes the purpose for which

it was instituted, I shall speak later. In this connection, he also adds, "and is indicated when cure by other measures is found impossible."

I quite agree with the late Professor S. MacCuen Smith "that in consideration of the opportunities of causing irreparable damages, the radical mastoid operation should be considered a major operation"; and also in his further conclusions that it is safe in the hands of competent operators, and is justified by the maximum amount of good it produces. I am inclined to maintain, however, that in view of the danger points adjacent to the field of operation, the operation should be approached with hesitation by the average operator and performed only when the "*indicatio vitalis*" demands. The x-ray, and other facilities of the present day enable us to obtain a more perfect and accurate knowledge of the field than heretofore; which tends toward better results. However, much must be taken into consideration and the seriousness of the operation must not be underestimated.

It is my custom to divide my cases according to G. Alexander's classification, viz.: The acute up to six months; the sub-acute from six months to two years duration, and after two years, chronic. The radical operation is performed only in the chronic cases unless special conditions present themselves: such as tuberculosis, cholesteatomata, labyrinthine infections, etc.

The presence of cholesteatomata and the source of the suppuration influences the decision for operation after the failure of non-operative methods. One of the greatest factors to be taken into consideration is the matter of hearing. If the functional activity of the middle ear remains the same, the hearing is not usually altered, but there is danger of its being lowered. If the patient can hear, using the general test of the watch when it is not in contact with the ear, the advisability of the operation should be questioned; in any case, the patient should be told the exact conditions and make the decision for himself.

In reference to the Eustachian tube remaining open, most otologists agree that no matter what method or device is used for closing it, it often remains patent. However, with nose and throat normal, there is little danger of reinfection and if such should occur, it can be readily cured by a few treatments.

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

We have many excellent papers on the radical mastoid operation, written by eminent otologists, but in nearly every instance an insufficiency of data made definite conclusions impossible and the success of the operation doubtful. In some cases we are left to wonder if the suppuration recurred. In others, we are told that it did so, but no reasons were given for its recurrence. Was the subsequent suppuration due to a defective operative technique, retention of exfoliated epithelium, dust, dirt, cerumen, moisture, or to infection through the Eustachian tube? And whatever the cause, did it respond favorably to after treatment?

What results are to be expected? to what extent are our expectations realized? to what are failures due? are matters in which there is much difference of opinion.

To my mind, a cure for chronic suppuration of the middle ear does not necessarily imply that there shall be no recurrence of discharge. Every case should be subsequently inspected, annually or semi-annually by the operating physician in preference, or by some specialist conversant with such ear work. Any recurrence of the suppuration can thus receive prompt and competent attention and all further trouble prevented.

When assured of the necessity for the operation the earlier it is performed the better are the results; especially is this true in point of hearing. Many failures are due to an insufficient knowledge of the anatomy or field; a disregard or ignorance of the variations of type of the individual human skull; or a failure to make the meatal opening large enough to secure proper drainage and allow proper cleansing.

It should be here mentioned that a very important factor toward success is, in securing a rounded cavity with smooth walls. Thus nature is relieved of the necessity of much work and a cure is hastened. The opportunities for the accumulation of pus are lessened and firmer cicatricial tissue is formed furnishing a greater resistance to mechanical agents.

Undue haste, and operating without warrantable indications, often occasion the operator much worry and can be blamed for the many accidents and unsuccessful results.

Lastly, I shall mention the neglect of subsequent inspection and care, which are as necessary to success as is the operation itself. I will pre-

sent a brief history of each case reported in order to make a comparative study of the results attained.

*X Case 1.* Mrs. W. M., aged 39 years. Otorrhea of right ear one year; facial paralysis three months; completely deaf; cholesteatomata; childless; no history of syphilis; no Wassermann made; radical mastoid operation, June, 1909. After treatment extending over four months, ear dry; paralysis and deafness uninfluenced.

April 10, 1917. Examination: No discharge during the eight years following the operation; partial facial paralysis; Eustachian tube open.

*Case 2.* J. K., male, aged six years. Otorrhea of right ear for 2½ years. Tubercular. Radical mastoid operation, 1903, by Dr. A. H. Andrews of Chicago. In 1905 the case came under my care with the history of frequent discharges from the ear. A partial ear drum, bluish in color, in the region of the hypotympanum, was opened, and a wine colored fluid escaped above and behind this granulation tissue and dried secretions were removed, uncovering ulcerated areas which were all treated with alcohol 50 to 75 per cent. In ten days the field of operation was perfectly dry.

April, 1917. During the last twelve years he has had three or four attacks of discharge which required only medical attention in the form of ordinary cleanliness to bring about relief.

Hearing at present:

Watch=½-inch.

Acoumeter=12 inches.

Forced whisper=13½ ft.

Conversational voice=12 ft.

Eustachian tube open.

*Case 3.* M. M., female, aged 11 years, 1906. Otorrhea of right ear for 1 year. Tubercular. Radical mastoid operation by Dr. A. H. Andrews. In 1909 the left ear commenced to discharge. Tubercular. Both bovine and human tubercle bacilli were found after four months of unsuccessful treatment with the following hearing: Watch=4 inches. The radical mastoid operation was performed March, 1910. Both ears have remained completely dry without an inspection until March of this year when she was suddenly seized with dizziness, sick stomach and vomiting, also discharge from left ear. After removal of crusts and debris and a few treatments with a solution of boric acid and alcohol, the symptoms subsided and the ear became dry.

Hearing, right ear:

Watch=contact.

Forced whisper=2 ft.

Conversational voice=11 ft.

Acoumeter=17 inches.

Eustachian tube open.

Left ear:

Watch=contact.

Forced whisper=15 ft.

Conversational voice=21 inches.

Acoumeter=18 inches.

Eustachian tube closed.



*Case 4.* M. B.; female; aged 21 years; 1911. Discharge from right ear since 1906, after scarlet fever; tubercle bacilli found in the discharges. Ozena since a child.

Hearing, right ear:

Watch=2 inches.

Conversational voice=2 ft.

Radical mastoid operation October, 1911.

April 4th, 1917, ear dry. At various times since the operation has had a discharge of pus from the ear, always caused from inattention on the part of the patient. A few treatments terminated the discharge.

Hearing:

Watch=2 inches.

Acoumeter=3 ft.

Conversational voice=4 ft.

Forced whisper=12 ft.

Eustachian tube closed.

*Case 5.* H. H.; male; aged 18 years; 1909. Discharge from the right ear since a child. Cholesteatomata.

Hearing:

Watch=contact.

The radical mastoid operation, 1909. The after-treatment was conducted by his family physician. Six months later the discharge continuing, I found upon examination a rather narrow meatus, a fetid discharge, a partial drum membrane and behind this membrane granulation tissue. After cleaning this out and using a daily application of 75 per cent. alcohol, I succeeded in getting a dry ear within a month. April 18, 1917, upon examination I found the ear still dry.

Hearing:

Watch=4 inches.

Acoumeter=24 ft.

Conversational voice=10 ft.

Forced whisper=24 ft.

Eustachian tube open.

*Case 6:* J. G. S.; male; aged 30 years April 1, 1912. Discharge from left ear two and one-half years. Klebs-Loeffler bacillus found in the discharges. No history of diphtheria.

Hearing:

Watch=not heard in contact.

Conversational voice=4 inches.

Autogenous vaccine used for three weeks and dose of antitoxin given; neither proved successful. The patient objecting to the radical mastoid operation because of the necessity of hospitalizing, I did an osculectomy. Six months later, October 28, 1912, there being no improvement, the radical mastoid operation was performed. March 9, 1913, ear dry.

Hearing:

Watch=contact.

Conversational voice=4 inches.

Forced whisper=10 ft.

Acoumeter=6 ft.

Eustachian tube closed.

Have been unable to get a later record.

*Case 7.* J. S.; male; aged 17 years. July, 1905. Left ear has discharged for last 14 years in spite of several periods of local treatment.

Hearing:

Watch=2 inches.

Forced whisper=20 ft.

Conversational voice=20 ft.

Operation on nose to relieve nasal obstruction, and thereby possibly stop the running ear, October 16, 1905. There being no improvement, the radical mastoid operation was performed. The ear did not become absolutely dry until April, 1907. April 9, 1917, no discharge from left ear for last ten years.

Hearing:

Watch=1 inch.

Acoumeter=2½ ft.

Conversational voice=7½ ft.

Forced whisper=17 ft.

Eustachian tube open.

*Case 8.* L. T.; female; aged 10 years; 1907. Left ear discharging since a baby. Tonsils and adenoids operated on by Dr. Marquis, of Chicago. In 1910 left ear still discharging. Chest examined by Dr. James Cole, of Chicago, who reported incipient tuberculosis. No tubercle bacilli found in ear discharges; mixed infection.

Hearing:

Watch=2 inches.

Conversational voice=12 ft.

December 29, 1910, radical mastoid operation. Slight facial paralysis followed, which disappeared in a couple of months. After a year of continued local and general treatment the ear became dry. Discharge has recurred only after prolonged periods of inattention to the hygiene of the ear. April 7, 1917, ear dry.

Hearing:

Watch=½ inch.

Acoumeter=9 inches.

Conversational voice=13 ft.

Forced whisper=17 ft.

Eustachian tube open.

*Case 9.* B. H.; female; aged 38 years; July, 1915. Both ears discharging intermittently for 36 years; cholesteatomata.

Hearing, right ear:

Watch=contact.

Conversational voice=2 inches.

Left ear:

Watch=contact.

Conversational voice=3 inches.

August, 1915, radical mastoid operation on left ear. December, 1915, radical mastoid operation on right ear. April, 1916, both ears dry. The region of the stapes of the right ear seeming free from cicatrices, I introduced an artificial drum in the form of a small pellet of absorbent cotton, moistened with liquid petroleum.

Hearing, right ear, without artificial drum:

Watch=contact.

Forced whisper and conversational voice=2 inches.

Acoumeter=contact.

With artificial drum:

Watch=not in contact.

Conversational voice=3 ft.

Forced whisper=7½ ft.

Acoumeter=9 inches.

Eustachian tube open.

Left ear:

Watch=contact.

Conversational voice=6 inches.

Forced whisper=10 inches.

Acoumeter=0.

Eustachian tube closed.

Uses electrophone to improve hearing.

Case 10. Mrs. B.; female; aged 46 years; May 5, 1910. Facial paralysis. Discharge from left ear for three years.

Hearing:

Watch=2½ inches.

June 7, 1910, radical mastoid operation. March, 1911, recovered from paralysis. April 13, 1917.

Hearing, left ear:

Watch=0.

Acoumeter=2 inches.

Conversational voice=13 ft.

Forced whisper=3½ ft.

Eustachian tube closed.

Removed crusts, not examined for four years.

Case 11. E. W. V.; female; aged 35 years; May 7, 1915. Discharge from left ear since 1912. Small fibrous goiter; nervous.

Hearing, left ear:

Watch=1 inch.

Conversational voice=15 inches.

Forced whisper=20 ft.

Tonsils and adenoids removed, 1913. Large polypus filling whole meatus. Removed polypus with alcohol. Eczema of ear, auditory meatus and back of ear. Treatment continued without improvement to December 15, 1915, when radical mastoid operation was performed. Because of infrequent treatments, patient absented herself from the office and the eczema, it took a long time to get a dry ear. However, April 11, 1917, after using vaccines without results, I can report the following results: Ear dry.

Hearing, left ear:

Watch=2 inches.

Conversational voice=3 ft.

Forced whisper=12 ft.

Acoumeter=6½ ft.

Eustachian tube open.

Case 12. R. D.; female; aged 10 years; June, 1916. Otitis media both ears after scarlet fever six months ago.

Hearing, right ear:

Watch=contact.

Left ear:

Watch=4 inches.

Radical mastoid operation on both ears.

April 26, 1917, examination, both ears dry.

Hearing, right ear:

Watch=contact.

Conversational voice=2 inches.

Forced whisper=6 ft.

Acoumeter=2½ ft.

Eustachian tube closed.

Left ear:

Watch=contact.

Conversational voice=7 ft.

Forced whisper=16 ft.

Acoumeter=8 ft.

Eustachian tube open.

From observation of these cases, it will be seen that suppuration exists even more frequently where the Eustachian tube has been closed than when it is left open. Only when there is some infection of the nose or throat may the tube be held responsible for the suppuration.

In the majority of cases, discharges arise from infectious materials entering through the external auditory meatus causing erosion of the poorly nourished cicatricial tissue. The result of this erosion is the accumulation of dried secretions. An inspection at definite intervals of the field of operation would tend to prevent the occurrence of this condition.

Again it will be seen that in only two cases was the hearing lowered; while in eight ears the hearing was either improved or remained the same as before the operation. In case 9, the use of an artificial ear drum bettered the hearing from two inches to three feet for conversational voice. These operations were performed only when I felt that necessity demanded. The results have been gratifying, especially in regard to suppuration and hearing.

Thus my own experience leads me to feel that the radical mastoid operation is fully justified since we can report the suppuration cured in 100 per cent. and the hearing either unaffected or improved in 80 per cent. of the cases reported.

30 N. Michigan boulevard.

#### DISCUSSION.

Dr. Beck (of Chicago) cannot see when the time is coming that the otologist will recognize the value of pathological study in connection with this disease. It is true, there is some attention paid to a tuberculous condition in the case of a cholesteatoma. It is the underlying change in the bone that plays the part, in his opinion.

As Dr. Long said, frequent inspection is necessary in order to remove these masses and get this poorly nourished bone cavity in a clean and aseptic condition.

If you can remove the mucous membrane at the pharyngeal end and get a complete cicatrization here and combine it with the Yankauer method or any method you please, you will be able to obtain a complete blocking of the tube. This is dissected out by way of the pharynx, not at the time of the operation, but subsequently, and will close every time completely. Insurance companies accept cases as cured even if they have a discharging tube, but the patient does not look upon it in just that way.

Dr. Holinger (of Chicago): The hearing certainly



in most of the cases is improved. One of the reasons for destruction of hearing is the unnecessary probing, poking into the middle ear at the time of the operation, and especially the use of the protector. This instrument is entirely too clumsy and is bound to luxate either the ossicles or the stirrup. A great many cases of bad results as to hearing are certainly due to the use of this instrument. It has to be discouraged under all circumstances.

Dr. Pierce (of Chicago) emphasized the necessity of examining very carefully every case of radical mastoid as to the function of the cochlea and of the static apparatus.

At the Illinois Eye and Ear Infirmary we have found that when the low tone limit was raised above 127, where there was a marked positive Rinne, and where the Schwabach was markedly increased, in other words, where, according to the pathology the diagnosis of stapes ankylosis was established, there was no improvement after operation, and these cases tended to become more or less rapidly worse, as regards hearing. Where this triad is not present, then there may be improvement immediately after operation, and the tendency is for that improvement to persist for a long time afterwards.

It is also important to examine by rotation and caloric tests the position of the static apparatus. Very untoward accidents have occurred in my experience where we have operated on cases in which this examination was not completely done.

Dr. Long (closing the discussion): Referring to Dr. Beck's statement in reference to the pathology, I might say that there is some pathology that I didn't have the time to read, and that would account for his making the remarks about no pathology mentioned.

In regard to what Dr. Holinger said about the use of the protector, I never use a protector, and I endeavor to have as little traumatism as possible, smooth the walls as freely as can be and give the best possible drainage.

One of the doctors made a remark to me about the artificial ear-drum. The head of the stapes must be free and the small ball of absorbent cotton moistened in the oil. I prefer to use petroleum for this purpose. The cotton is placed in contact with the head of the stapes. The patient must place those artificial ear-drums themselves. They just get it at a certain point, and it is satisfactory to them to know that they can hear better. I don't understand the physics of it very well, but at any rate, the wave of sound must be caught up by this little artificial ear-drum.

As to Dr. Pierce's reference to the examination of these cases, I want to say that that was what induced me to write this paper. After looking over the literature, I learned that most of the gentlemen reported cases of the end results of the radical mastoid operation and failed to tell you anything about the hearing before the operation. Dr. Harris, of New York, wrote a paper about a year ago, but there was nothing definite stated about the hearing before the operation, while most of the cases that I have collected together have the examination of the hearing

before and after the operation. I went back as far as I could, for I felt, as Dr. Pierce suggested, that the longer these cases go on, the more the hearing is liable to fail, so the early cases, 1903, 1904, 1905 and 1906, are the ones that I place more confidence in in regard to the condition of the hearing than those that were operated on one or two years ago.

## THE KRONLEIN OPERATION WITH REPORT OF CASE.\*

EDWARD E. EDMONDSON, M. D.,

MT. VERNON, ILL.

This operation suggested by Wagner and put into actual execution by Kronlein independently of Wagner in 1886 is a distinct advance in the surgery of the orbit. By it one is enabled to explore the region of the retrobulbar portion of the orbit without interfering with the function of the visual organ and in many cases to remove tumors and penetrating bodies that are located in the orbit without the unsightly results of enucleation.

There are several well known modifications of the Kronlein operation. Czermak offered one with the object of exposing more of the orbital cavity, but as it is doubtful that it is of greater value to the oculist it is not used as frequently as the original operation; it contemplates removal of the lower edge of the outer wall of the orbit in addition to that recommended by Kronlein.

Perinaud and Roche offered an operation practically the same as Kronlein's except that the skin flap was made to curve backward; this was intended to prevent cicatrizing so near the canthus.

Rollet recommended a curved incision along the lower and outer edge of the orbit and resected the outer wall of the orbit from this horizontal incision.

Franke's modification consisted of the skin incision being made along the upper and outer wall of the orbit and resecting the flap downward and thus entering the orbit.

Cohen chiselled away the entire outer wall of the orbit for good in an effort to remove the supraorbital nerve.

Gussenbauer made a temporary resection of the framework of the nose and thus entered the orbit back of the globe, but these resections are

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

so much more complicated than the original direct method devised by Kronlein that they are suited for very select cases only.

*Indications*—Domela has made a comprehensive collection of cases and the deduction drawn is that Kronlein's operation is indicated in (a) retrobulbar cysts dermoid, echinococcus or cysticercus; (b) tumors of the optic nerve and its sheath; (c) Orbital abscess; (d) retrobulbar cavernous angioma, lymphangioma, aneurisms, varicosities of the orbital veins, lypoma, osteoma, and other tumors of the retrobulbar space; (e) retrobulbar injuries and foreign bodies in the orbit; (f) operations for the removal of subretinal cysticercus in the macular region and it has been done for the purpose of opening the sheath of the optic nerve in choked disc, and in Mueller's operation for retinal detachment; (g) It is also justifiable for diagnosis in doubtful cases, being free from danger and often the only means of arriving at an accurate diagnosis in obscure retrobulbar process.

*Technic*—The patient is prepared by shaving the eyebrow and the hair from the temporal region, the patient is then given a general anesthetic and the head rests on the sound side. The skin incision is made in a curved line running from the linea semicircularis of the frontal bone at a point of intersection with a line drawn 1 cm. above the supra-orbital margin and passes forward and downward along the temporal edge of the orbit to the level of the upper edge of the zygoma when it is curved backward to end at the center of the zygoma. The incision in adults is 6 or 7 cm. in length, while in children it is proportionately shorter.

At the center of the incision a curved elevator is introduced beneath the periorbital and the outer wall of the orbit is freed from the soft tissue back to a point well behind the spheno-maxillary fissure and if necessary to the anterior end of the sphenoidal fissure. Care should be exercised not to injure the infra-orbital nerve.

The zygomatic process of the frontal bone is then cut through above the suture and the zygoma is then cut through at the lower margin of the orbit, either with a saw or sharp chisel, and the outer wall of the orbit is removed by straight incisions from these points to the anterior end of the spheno-maxillary fissure or possibly for 1 cm. back of its anterior end. The whole flap



Fig. 1. Before Operation

thus made is elevated and the orbit is exposed. The periorbital is then split from before backward to expose the external rectus muscle which in turn should be carefully drawn aside or sectioned near its tendinous extremity and the abducens drawn aside to afford a view of the contents of the orbit.

With the operation finished the eye muscles



Fig. 2. Three Weeks After Operation



that have been sectioned are again brought together with sutures and the bone and skin flap replaced and the periosteum sutured with silk and the edges of the skin incision closed with sutures or Michel clips. A drain should be placed in the upper part of the wound to prevent the formation of hematoma in the orbit. The eyelids should be sutured together to aid in preventing proptosis due to hemorrhage. An occlusive bandage should next be applied.

*Case Report.*— Girl, aged 13 years. Right eye was noticed to be fuller than the left since the child was two years of age. Vision at that time was not impaired; the proptosis was so gradual that the family and the family physician did not urge any measures for her relief. The eye gradually became more prominent till at the age of 13 the patient became so sensitive of her appearance that she insisted that the eye be operated on for cosmetic effect, and for this purpose she was brought to me. A test of her vision showed only perception of light. I made a grave prognosis in regard to vision and a guarded prognosis regarding motions of the eye for some months after operation on account of the elongation of the recti muscles.

The eye had protruded more than three-eighths of an inch and the lids were quite thin and closed only with effort. The iris and pupil could be seen through the closed lids.

I operated on the eye on December 30, 1916, by the Kronlein method and found a lypoma lying on the nasal side of the optic nerve and just behind the globe, which was easily removed and the eye dressed as above outlined.

The patient was able to elevate the lid almost to normal on the 15th day and on the 30th day was able to rotate the eye outward to a limited extent. The movements of the eye and the use of the lid are improving and the anterior position of the eye in the orbit is normal. The scar left is not noticeable to the casual observer and is mostly covered with her hair.

The photographs illustrate the appearance before and three weeks after operation.

#### OPERATION FOR ANTERIOR SYNECHIA WITH REPORT OF CASES OF SECONDARY GLAUCOMA AND STAPHYLOMA IN WHICH IT WAS USED.\*

C. G. DARLING, M. D.,

CHICAGO.

Ophthalmic Surgeon, Cook County Hospital

The formation of anterior synechia after perforating ulcers or injuries of the cornea often leads to a secondary glaucoma with or without the formation of a staphyloma of the cornea.

This is particularly true if the area of incarcerated iris is large or the pupillary area is the part adherent.

The operation for these conditions of which I wish to speak consists in doing Heines' cyclodialysis operation in the regular manner opposite the area of iris to be freed. This operation, as you remember, consists in making a small conjunctival flap about a centimeter from the limbus. An incision 5 or 6 mm. long is made through the sclera parallel to the limbus and about a centimeter from it; this incision can be made with a keratone, using sawing movements, care being taken just to work through the sclera and not to cut the choroid.

Now a spatula is introduced between the choroid and the sclera and worked forward into the anterior chamber.

The spatula which I use differs from the usual one, in having a small cutting edge just back of the end on each side. The spatula is passed forward, separating the iris from the cornea and the anterior synechia are cut free from the cornea by using the small cutting edge of the spatula, the posterior surface of the cornea being hugged by the spatula all the time. If the corneal scar is in the pupillary area an optical iridectomy can now be done by cutting down on the spatula well back in the limbus and enlarging the incision with scissors or canaliculus knife. Or one can wait and do the operation in the regular way at some later date after the formation of an anterior chamber. This makes it easy to do an iridectomy in complete obliteration of the anterior chamber with staphyloma of the cornea. When there is a large staphyloma<sup>1</sup> and only a very narrow rim of cornea the operation may have to be done from two or more different points to free the entire iris root.

I believe the operation described has some advantage over other operations when dealing with large anterior synechia; the principal advantage probably being that the iris is freed from the cornea *well back to its root* and the anterior chamber as a result being completely reformed. This will not be done by iridectomy in these cases as the iris root is adherent to the cornea, and also iridectomy when the anterior chamber is absent is very difficult to do.

I wish to very briefly report three cases in which this operation was used.

*Case 1.* Patient, male, aged 37 years, entered Dr. Clark's service at the County Hospital, complaining of

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

great pain in the left eye and side of head. The interne gave several injections of morphin, which did not control the pain.

Examination showed a large adherent leucoma of cornea involving the center one-half of the cornea. Tension 80 mm. No light perception. The operation was done by freeing the iris from the cornea as described, no iridectomy being done. Tension remained from 10 mm. to 15 mm. Eye kept quiet. No light perception.

*Case 2.* Patient, male, aged 45 years. Following large ulcer of cornea with perforation, patient developed a staphyloma of the cornea of the right eye. On the nasal side there was a small area of clear cornea about two and one-half mm. across. On account of staphyloma, tension not taken with tonometer. Vision, light perception. Operation done combined with

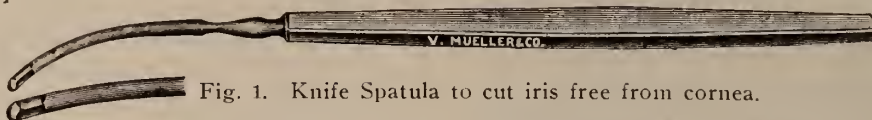


Fig. 1. Knife Spatula to cut iris free from cornea.

iridectomy behind clear area of cornea. Result: Flattening of staphyloma; vision fingers 10 ft. Tension 15 mm.

*Case 3.* Patient entered my service at County with perforated ulcer near center of cornea. Tension 60 mm. after healing of ulcer. The patient was a Pole who spoke no English and was very hard to control through interpreter. After making the scleral cut and introducing spatula about 2 or 3 mm. patient suddenly raised his head and the spatula tore the choroid and vitreous prolapsed. I did not proceed to pass the spatula into anterior chamber, but replaced my conjunctiva flap. Eye did not become inflamed and has remained quiet. Tension remained down for two weeks, and then became slightly increased, this lowering being probably due to injury to ciliary body and the posterior sclerotomy. Vision, light perception as before. This attempt at operation was done over one month ago; if eye remains quiet will do an operation to free the iris under a general anesthetic.

1. C. G. Darling: A Method of Operation in Complete Obliteration of the Anterior Chamber with Report of a Case of Corneal Staphyloma. *Ophthalmic Record*, February, 1917. Fig. 1. Spatula used to cut iris free from cornea.

## ATROPHIC RHINITIS.\*

W. G. HATCH, M. D.,

ROCKFORD, ILL.

In the whole list of nasal diseases there is not one that can be so truly designated as a real affliction as atrophic rhinitis. No class of cases that come to my office so appeal to my deepest sympathies as these same disgusting ozenas, and none had I found so resistant to treatment until I used trichloracetic acid.

My attention was first called to the therapeutic value of this acid while working in the Politzer clinic in 1901 and 1902, where under the tutelage

of Drs. Frey and Alexander I succeeded in closing perforations in several ear drums. I did not use it again for other purposes until my attention was again called to its value in an article by Dr. Fitzgerald in the 1909 Year Book of Eye, Ear, Nose and Throat. He was very enthusiastic over its use in all purulent infections of the nose and throat, and classified it as one of the best of anodynes. He did not specify having used it in atrophic cases.

At the time I read this article I was treating several cases of atrophic rhinitis by the classical ichthyol and glycerine tampons after thorough cleansing, as recommended by the leading text-

books, and with the usual unsatisfactory results. Dr. Fitzgerald's experience called to my mind the reparative properties of trichloracetic acid in ear drums, and I decided to experiment with it in ozena cases and determine whether it would regenerate nasal tissues as well as it did the membranes of the ear.

I have treated in the past two years fifteen cases. I am aware that this is not a sufficient number to determine a definite specific action, but the results have been so uniformly good and so far in advance of any method I had previously tried, that I decided to call your attention to it that you might prove its worth in your own practices.

My technique has been:

First. Use the Brawley suction to draw the secretions from the sinuses and cause hyperemia of the tissues.

Second. To thoroughly remove the crusts with 25 per cent hydrogen peroxide and an alkaline spray and douche.

Third. Apply 25 per cent trichloracetic acid well up into the ethmoid region and around the middle turbinates.

Fourth. The patient then assumes a reclining position with head hanging down over edge of table until nostrils point straight up toward ceiling. I then pour into each nostril about four drachms of 1 to 5 per cent solution of trichloracetic acid.

The 25 per cent application is used only in severe cases and usually but once. In after treatments the 10 per cent only is used. The office

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



treatments are given three times a week. For home treatment the patient is given a Douglas donche originated by Prof. Beman Douglas of the N. Y. Post Graduate School, with instructions to cleanse the nose thoroughly with warm salt solution three times a day. After each cleansing they are told to assume the above-mentioned reclining position and pour a test tube full of warm 1 per cent trichloroacetic acid into each nostril.

I find this position very useful in treating other conditions involving the naso-pharynx, although milder solutions are advisable in hyperesthetic cases.

In many of these cases it is quite remarkable how rapidly the crusts and odor disappear. Some cases are more resistant than others, but all have experienced marked relief and like the treatment, which is not disagreeable or painful at the time or afterward.

In conclusion, the advantages of this treatment are:

First. Its simplicity, only a few minutes being required for each case.

Second. The rapid disappearance of crusts and odor.

Third. Its cleanliness, so different from ichthyol.

Fourth. The absence of pain or disagreeable symptoms, the patient admitting a sense of relief after treatment.

#### DIAGNOSIS OF ACUTE MASTOIDITIS AND INDICATIONS FOR OPERATION.\*

A. EDW. SHERMAN, M. D.;

AURORA, ILL.

Mr. President and Members of the Society:

When I received a telegram from your president, requesting that I write a paper upon the topic of the diagnosis of acute mastoiditis and the indications for operation, I was so surprised that I accepted the invitation and overstepped my self-made rule that I would not present before any society a paper that did not show the results of original research.

What I have to say upon the above mentioned topic contains nothing original nor as far as I know, anything new. I have boldly consulted the works of Kerrison, Phillips and Kyle and

borrowed information from my good friends, Drs. B. F. Andrews and Bookwater.

In making a diagnosis of mastoiditis we probably can first consider primary and secondary purulent mastoiditis. Primary mastoiditis is very rare and many cases which we probably diagnose as primary mastoiditis are acute exacerbations of an old inactive process. These cases are sometimes very difficult to diagnose, as the drum membrane may be absolutely normal and no history of discharge or any of the usual symptoms except pain are to be elicited. And we may only be able by the use of the x-ray, trans-illumination and the blood counts showing a process of infection somewhere in the system, to make the diagnosis.

Typical secondary mastoiditis is a much more frequent occurrence and is due to the spreading of a middle ear suppuration which had so far been confined to the tympanic cavity and antrum to the mastoid process. The involvement of the mastoid occurs either after the type of continuous extension (chiefly in the mastoid air cells), or after the type of metastatic suppuration, chiefly in the diploic mastoid. In the former case the mastoid abscess is in communication with the rest of the middle ear spaces from the beginning. In metastatic formation the abscess may at first be closed on all sides and a communication with the other middle ear spaces is only created by a perforation of the abscess in the antrum. Mastoiditis and middle ear suppuration occur at vastly different periods. After only a few days of middle ear suppuration the mastoid cells may be filled with pus and probably in a large number of cases pus enters the mastoid from the antrum in certain positions of the head or body or through physical causes without giving rise to any material co-inflammation of the mastoid. In many cases these changes will rapidly return to normal, so that at the end of the first week of the middle ear suppuration the mastoid region is again normal and free from pain. The typical purulent mastoiditis sets in during the third or fourth week of acute middle ear suppuration and after more or less prodromal signs at a time when the secretion from the external auditory duct usually still persists.

We may, if you please, divide the symptoms according to location. First, symptoms of the mastoid itself. Second, other ear symptoms. Third,

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.

cerebral symptoms. Fourth, general symptoms.

Phillips divides acute purulent mastoiditis into two types: First, a form which is almost painless, but characterized by a very profuse otorrhea. Second, a form evidencing intense deep-seated pain from the very beginning and having only a moderate amount of ear discharge.

Under mastoid symptoms we will mention (a) pain, which may be either not present at all, slight or very severe; maybe tenderness upon pressure over the mastoid cortex, the antrum, tip, zygoma, mastoid emissary vein; (b) swelling of the soft covers of the mastoid, which would be more apt to be the case in children. In advanced cases the skin over the mastoid may be tense, glistening and hyperemic. In some cases the auricle stands forward, even approaching a right angle to the side of the head. Again no pain, tenderness on pressure or swelling may be present.

Second. Ear symptoms. In the ear we may find either a moderate amount or a very profuse discharge. In some cases the discharge may be much lessened at the time the local mastoid signs are intensified and here we have the symptom of pus retained in the tympanic cavity, such as violent throbbing ear pains, similar to those occurring in the beginning of otitis media. In other cases profuse discharge which persists for weeks with obstinate earache point to involvement of the mastoid process. Swelling of the posterior superior canal wall and bulging of the upper segment of the drum head, which is not relieved by paracentesis, is considered by some a positive sign of involvement of the mastoid cells.

Third. Cerebral symptoms consist in diffuse headache which is usually localized towards the affected side, nervous excitement, and sometimes symptoms of involvement of the labyrinth with vomiting, vertigo, nystagmus, or convulsions in the initial stage.

Fourth. General symptoms. First may be mentioned fever, which if present must be considered and may in children reach 104. Frequency of pulse and respiration is increased in proportion to the fever. General depression of the patient, depending upon his subjective complaints. There may be considerable regional pain, general physical unrest, especially at night, anorexia, lassitude, bad complexion. patient gives the impression of being very ill. On the other

hand, some may show no subjective or objective manifestations whatever, even in the presence of a large mastoid abscess.

The examination of the blood may show high leucocytosis and polynuclear percentage. The x-ray, when good radiograms can be obtained, gives a very good picture of the condition of the mastoid and both mastoids should be taken for comparison. Transillumination is also of value in determining the condition.

*Diagnosis*—Taking all of the above symptoms into consideration, there should be but little difficulty in arriving at a diagnosis in the average case of acute mastoiditis.

*Differential Diagnosis*—Probably it is well in making our diagnosis to take into consideration, first, otitis externa furunculosis; second, erysipelas of the auricular region; third, pediculosis capitis with lymphangitis of the scalp, as well as moist eczema and furunculosis of the scalp again, reflex pains from the tonsils and enlargements of the posterior auricular glands placed high up may simulate a mastoid involvement.

Having made our diagnosis, the question of treatment is the next important step to be considered and the topic for consideration now is when we shall operate. The operation is indicated whenever there is a purulent inflammatory condition which invades the mastoid antrum and cells, having all or part of the hereafter mentioned symptoms present. Tenderness on pressure over the mastoid; drooping of the postero-superior canal wall and bulging of the drum membrane which does not diminish as a result of paracentesis, which symptom by some is in itself considered an indication for operation; fever, which, while not characteristic, must be considered in infants and young children; a prolonged, profuse discharge which persists after a free paracentesis due to a virulent type of pathogenic bacteria and in patients whose vitality has been weakened, which resists all approved measures of local treatment after six or eight weeks, is also considered in itself an indication for operation. For with no other symptoms the mastoid has been found the seat of extensive destruction. Sixth, subperiosteal postauricular swelling with or without superficial abscess.

By all means the operation is immediately demanded in an acute mastoiditis developing in the course of a chronic purulent discharge. Second,



upon the advent of symptoms of labyrinthitis such as destroyed audition, nausea, vertigo and nystagmus. Third, the appearance of facial paralysis. Fourth, symptoms of intracranial involvement.

Many of us who live in the smaller cities have been in the habit of trying to cure our cases by leaning more to the conservative and unoperative line of treatment, but when we see the extensive destruction that may in a very short time occur with but few severe symptoms, and when we can observe and profit by the observations made by Kyle in suspicious cases of mastoiditis with the use of the x-ray, I am fully convinced that we are in the wrong and that those of our colleagues in the large centers who are seeing many cases and to us may seem to be operating without sufficient cause, are in reality performing skilfully simple mastoid operations, getting brilliant results with practically no danger to the life of the patient, with an immediate relief of pain and suffering, and the cure of a destructive purulent discharge with which we are but playing and menacing the life and comfort of the patient. For how gratifying it is to the otologist to see his patient recover, in some selected cases in certain methods where the mastoid can be immediately closed up, the illness being but a matter of days. We find on examination normal and intact membrana tensa and perfect hearing, something which is not the rule after the cure of an old chronic discharging otitis media with adhesions, ankylosis and remnants of a thickened membrane which might have been avoided, had in time a well performed, simple mastoid operation been performed. Furthermore, the tendency to serious intracranial and labyrinthian complications with the possibilities of recurrence and loss of life are greatly lessened.

108 Main Street.

#### THE INTERPRETATION OF THE FINDINGS OF THE TRANSILLUMINATOR.

WM. G. REEDER, M. D.

CHICAGO.

A perusal of the reports of different observers regarding the value of the transilluminator as a diagnostic agent in otorhinology reveals much variance of opinion. In the hands of some it is an indispensable asset; to others, it has proved

of but little value. A study of its uses and limitations, therefore, may be indicated.

The translucency of the normal living tissue is truly remarkable; and conversely the disturbance of translucency in the presence of disease or death is equally striking. From the physical standpoint, translucency is a property dependent upon volume, density, and refractibility. Any or all of these factors may be altered sufficiently by cellular changes which accompany inflammation or death of a given tissue, to modify the normal translucency. Upon these physical phenomena is based the use of the transilluminator as a diagnostic agent.

If experience or comparative studies indicate the amount of light that should penetrate a given normal tissue, then any variation of light and shade as evidenced by the presence of an umbra or shadow, may indicate the presence of an atypical or pathological condition. As to atypical conditions, a pneumatic mastoid will illuminate more brilliantly than one that is diploetic in type. Fortunately, however, the mastoids of the same individual are bilaterally symmetrical and typical to a fair degree, so that comparison of the test with the fellow mastoid is of value in determining whether the picture portrayed is due to atypical or pathological conditions. It is quite generally conceded that transillumination is of little value in the diagnosis of frontal sinus disease because of the inconstancy, the variableness, and lack of bilateral symmetry of these sinuses. The maxillary sinuses are quite constant as to their size and shape, but with the transilluminator in the mouth position, one may be misled by atypical intranasal conditions such as a large turbinate body on one side, or a marked deflection or thickening of the septum. A previous article called attention to the cheek position of the transilluminator which obviates this possible source of error. (*Journal, A. M. A.*, April 29, 1916.)

The pathological changes involving the accessory sinuses or their walls which may disturb their translucency and consequently cast a shadow are many and varied. Common among them are: (a) hyperemia; (b) infiltration; (c) cellular degeneration; (d) pus; (e) hemorrhage; (f) hyperplasia; (g) hypertrophy; (h) atrophy; (i) neoplasms.

In the course of acute catarrhal rhinitis, a shadow is present, to a greater or less degree, over the accessory sinuses, in proportion as they

share in the congestion. It may require a low degree of illumination to detect it. The shadow becomes more pronounced as infiltration and cellular degeneration take place, reaches its height with pus formation or necrosis of bone, and recedes with resolution, persisting with the permanency of hyperplasia or hypertrophy of involved walls, and remaining permanent in the presence of organized new tissue.

In all cases of acute suppurative otitis media, the normal translucency of some portion of the mastoid is invariably disturbed. If hyperemia alone is present, the shadow is faint; but if infiltration takes place and gives way to pus formation and necrosis of bone, translucency becomes entirely abolished. In the presence of chronic suppurative otitis media, the mastoid is almost invariably quite opaque, because of the presence of eburnized bone.

It is evident, then, that the presence of a shadow over the mastoid or a sinus does not mean the presence of *pus*. It may mean that cellular degeneration has begun and a zone of infiltration has formed; it may mean the presence of free pus; it may mean the presence of dead bone; it may mean that the suppurative stage is past, and that complete resolution is not yet established; it may mean that organized new tissue is present; it may mean the presence of a new growth; and finally, it may mean, as before stated, an atypical anatomical condition.

It follows that the presence of the shadow over a sinus or the mastoid does not necessarily indicate that the case is surgical by any means. It *may* indicate surgery—yet any one of the above enumerated non-surgical conditions may be present. Most acute cases of mastoiditis or sinusitis which show a shadow go on to resolution without surgical intervention. Surgery based upon the findings of the transilluminator alone is exploratory surgery.

May disease be present and still no shadow be cast? It may be, but only in the event that too intense illumination has been used. The rule should be to use the least possible illumination, lest even disturbed translucency be overcome and pass unnoticed.

What, then, is the value of the transilluminator? Alone, it gives but presumptive evidence of disease. Used in conjunction with other signs and symptoms, it becomes one of the strongest links in the chain of clinical evidence.

25 E. Washington Street.

## HOW THE EYE AND EAR SERVICE IN GENERAL HOSPITALS CAN BE IMPROVED\*

FRANK ALLPORT, M. D.,

CHICAGO.

Of all specialties ophthalmology and otology are the most highly specialized. In this paper I will refer to these two departments as one, for purposes of convenience. This was the first specialty to be established in the medical profession, and it has retained its isolation from that day to this. Even those "General Specialists," who attack everything from childbirth to corns, generally avoid eye and ear diseases, and especially eye and ear operations. They usually apologetically announce that they "don't pretend to do eye and ear work; and willingly refer the patient to a specialist. The avoidance of this department of our profession reaches to hospitals, hospital superintendents, internes and nurses. Surgeons, internists, obstetricians, pediatricians, orthopedists, etc., all meet with a hearty welcome, and co-operation in general hospitals, but the eye and ear surgeon usually finds himself more or less isolated, the service more or less reluctant and unskillful, and is obliged to do his work amid many difficulties and perplexities. His patients are scattered from one ward to another, and he is, therefore, dependent upon a variety of nurses, none of whom are really competent to administer to his necessities. Nurses or internes may be, and usually are competent to care for the average patient. They can give medicines, enemas, baths, etc., dress and care for injuries, and other surgical cases, etc., etc., but when it comes to putting drops or ointments in eyes, irrigating eyes or ears, dressing and bandaging eyes and ears, etc., they are, as a rule, not only incompetent, but actually dangerous, and many eyes have been lost from the awkward, ignorant and bungling care of incompetent internes and nurses. For this they are not to blame, they do not know how, because they have not been properly taught and trained. They are the innocent victims of bad conditions. It remains for us to correct these conditions. As patients are scattered from ward to ward, so the means of treatment and dressings are kept in various places and in diverse conditions. As the

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



surgeon passes from one ward or room to another he meets various nurses of various qualifications who have charge of his various patients. They have none of them had *much* experience in this special work, but some are worse than others. Through their incompetency the surgeon is almost compelled to do the nurse's work himself, and he may as well recognize the fact, that if he wants the dressings done properly, he will have to do them himself. It is simply flying in the face of Providence, for instance, to allow the ordinary interne or nurse to dress a cataract case, after operation, when the slightest pressure on the eyeball, may mean the destruction of the eye. Besides this, how is the surgeon to know, beyond a reasonable doubt, that all the solutions, bandages, ointments, cotton, droppers, etc., are actually aseptic when he proceeds to dress his cataract, iridectomy, advancement, mastoid cases, etc. I knew two cataract cases to be lost in one week in one ward from impure dressings, for which the surgeon was in no way to blame. Surgeons should be assisted in their work by competent internes and nurses, and should be able to depend absolutely upon the purity of all dressing materials. This can scarcely be possible where patients and materials are scattered all over a hospital, with nobody particularly responsible for them. Under these conditions, solutions and ointments are hardly ever fresh, and bandages, droppers, probes, cotton, etc., are hardly ever sterile. Even if an eye and ear tray, properly stocked, is used, its contents are usually not reliable, as it is a general hospital tray, subject to many adventures, and under the care of nobody in particular, and not properly guarded when not in use. One annoying feature of the present system is the fact that the instrument, or drug, or appliance that is wanted at the present moment, is rarely on hand when it is wanted. The atropine solution is perhaps on another floor, the probe is in the operating room, the eserine ointment is in some other building, the ophthalmoscope is in the supply room, and when found, is out of order, or no proper illumination can be found, etc. It is hard and exasperating to work under such conditions, and the wonder is, that we consent to do it, when it really is not necessary.

The ever changing interne and nurse evil, is also a source of irritation, poor service, injustice

to the patients, and exasperation to the doctors. They are both changed every few weeks in most hospitals, and they no sooner get to be of some little real utility, to the suffering surgeon and patient, when they are changed to another service or ward, and the work has to be begun all over again. Truly life is hard, and our dolls are—more or less—stuffed with sawdust.

Now, how about the operating room, and how can the many trials of this department be described in a few words? In the first place, there are but few general hospitals possessing adequate instrumental armamentarium for the eye and ear surgeon. He, therefore, usually has to take along his little bag, with his instruments, etc., and generally leaves in his office, the very thing that he most needs. These things have to be prepared for operation, after he arrives, which always consumes considerable unnecessary time. In the operating room, he is usually confronted with new nurses, just taking the operating room training, who know nothing, or little of his individual needs. The average operating room nurse has but little respect for ophthalmological instruments. She throws them around with the same ease and assurance that she employs in handling tools for ordinary surgical procedures. She has no regard for a cataract or iridectomy knife, and allows their points and edges to be dulled in an instrument tray, little realizing that a bad knife may mean an unsuccessful operation and blindness. Operating in an alien atmosphere is disastrous, to all parties concerned, and especially to the patient, who confides his sight, life or health to the safe keeping of his surgeon, and his hospital. The operator should be able to work in a calm, peaceful and undisturbed frame of mind, giving the best he has to his patients, who depend upon him for results. He should not be obliged to watch the nurses or internes to see if sterile solutions are being used, or if instruments are being rendered unfit for service, etc. His mind should be given undividedly to his work, and he should be able to realize that all details will be properly cared for without his personal supervision. The eye, ear, nose and throat surgeon should never be obliged to carry instruments to the hospital. They should be provided by the hospital, kept locked in a private cabinet, and be kept in perfect order by the special and permanent eye and ear nurse, and the chief operating room nurse. Much more might be said concern-

ing the unsatisfactory conditions prevailing in most general hospitals, so far at least as our special work is concerned, but enough has been said to call attention to the matter and you can all supply any missing evidence yourselves, for we are all fellow sufferers. What we are principally interested in is relief, and my object in writing this paper is to endeavor to point out some practical methods by which relief may be obtained.

In the first place, we must realize that this is a two-sided proposition. We must not seek to throw all the blame on the hospitals, we must acknowledge our own sins, before we mention the sins of others. It is best for us to connect ourselves with a good agreeable hospital and then stick to it. It is better not to change from one hospital to another, seeking to test them, or endeavoring to extend our acquaintance, and influence. This method *may* extend our acquaintance, but it will surely lessen our influence. Our work should be all or at least nearly all done in one hospital, as, by doing so much time is saved, and we become familiar with a certain hospital, and the hospital becomes familiar with us and gradually gets to understand our wants and necessities. After a while, by pursuing this policy, we become a feature of the hospital, and acquire some influence in its management. By thus concentrating, instead of scattering our patients, we become a financial asset to the hospital, and are in a position to successfully ask for better, and still better facilities for our work. Hospitals must have financial resources, like any other business, and unless it is abundantly endowed or supported by funds, must look to its medical friends for its support. Hospitals will, therefore, naturally favor doctors who constantly send them business, and are loyal to their organization, therefore, if you want sympathy, support and co-operation, give your undeviating loyalty to your hospital, and it will naturally do all it can to help you in your work. Very few ophthalmologists have a sufficient number of hospital cases, to make much impression on *several* hospitals, whereas most ophthalmologists in mature and active practice have enough patients to command attention, if they are all sent to one hospital.

We should connect ourselves with a hospital that is willing and glad to admit charity cases to its wards. This adds materially to our experience, enlarges our operative possibilities, and en-

ables us to build up a clinic or operative day or days. Unless an eye and ear surgeon has a rather large number of charity patients his hospital and operative cases will be more or less limited in number. We all need experience, and plenty of it, to keep us up to the mark and unless we are connected with some eye and ear infirmary or dispensary, we cannot grow, as we otherwise would. Therefore, let us become connected with hospitals that really welcome charity patients, in order, to enlarge our scope of usefulness.

Another point that I regard as very important, is to encourage other eye and ear surgeons to come on to the staff, and help to build up the eye and ear department. Some ophthalmologists are so narrow that they want to monopolize the entire department, or as much of it as they can. This is very poor policy, as the more eye and ear work done in your hospital, the greater will be your influence, in instigating reforms calculated to make your service and work easier and better. Therefore, encourage the entrance of good, agreeable and prosperous men in the staff, and you will find it will be beneficial to all parties concerned. I would advise you to build an operative day or days at your hospital, especially for charity or semi-charity patients. This should be done in connection with some medical school if possible, but in any event it should be done. Take any day in the week, in the morning or afternoon, as best suits your convenience, and set it aside for operations. Do your best to always fill these hours, and let it be known that operations can be seen at these times. Welcome doctors to your clinics, and make yourself as instructive and entertaining as possible. If your work grows, have two operative days or even more. After a while these days will become a feature of the hospital, and well known to the profession. Upon these days you can operate on your charity cases. Many people are poor, but still wish to pay *something* for an operation. You can tell such people that you will operate for a greatly reduced fee, if they will allow you to operate in the clinic, and most of them will gladly avail themselves of the opportunity. These are some of the things which *you* should do in your hospital, in order to perform *your* part of the partnership, and so that you may convince the hospital authorities that it will be a good move for them to make, to improve your service and facilities as much as they possibly can.



Now, what can they principally do to help you in your work, to add to the reputation of the hospital, and increase the chances of good results to patients? I think the most important thing they can do will be to give the eye, ear, nose and throat department a special nurse. Of course, what is really required is to have a graduate nurse given to you, who can stay with you permanently, and one who lives at the hospital and receives an adequate salary. In no other way can the best services be obtained. But if this is not possible at first, you should at least be given an undergraduate nurse who will be the exclusive nurse for your department for at least from three to six months. This will help considerably, and will almost surely lead eventually to a permanent graduate salaried nurse. A nurse of this kind will help you more than anything else in your hospital work. She will accompany you as you see your patients. She will carry with her a tray of drugs, solutions, instruments, etc., all fresh and aseptic, and such other things as are necessary in treatments, examinations, etc. You can leave all instructions with her, as to the care of your cases and she will take entire charge of your patients while you are away from the hospital. She will take charge of your instruments, keep them in order, and get ready for all your operations, and assist you in their performance. You will be dealing with one, intelligent, experienced, and responsible person, instead of with many, ignorant and irresponsible people. This *must* make your work easier, and your results better. As soon as possible you should be given an interne who will stay on your service for one year, for in no other way can you secure good and helpful interne work. Short interne service is unsatisfactory in any event, but it is especially unsatisfactory in eye and ear work. It is particularly unfair to the medical and surgical staff, for under this system they never secure really satisfactory interne service. Some means should be devised by which young doctors can secure not only experience in all hospital departments, but after this has been accomplished, can obtain a long service in the special department which they intend to cultivate as a specialty in their life work. In this way they not only would be fitting themselves for their ultimate occupation, but they would render better service to the patients, and last, but not least, to the doctor.

It should always be remembered that while it

is the duty of hospital staff doctors to educate internes and nurses, it is also their duty to look after the best interests of their patients, and it should furthermore be their privilege to make their own work as comfortable as possible, and this can be best done by perfecting their hospital service in every conceivable detail.

It may be thought that it would be difficult to secure the services of an interne, who would serve in this department for an entire year, but this has not been our experience in St. Lukes Hospital in Chicago. We have always had a "waiting list," for it must be remembered that while many young doctors desire to become eye and ear specialists, the number of eye and ear hospital internships is distinctly limited, and not easy to secure. As soon as our programme was formed at St. Lukes, and it became known that we were prepared to retain an interne for one entire year, and that the position was desirable and possessed reasonably good possibilities, we had no difficulty in securing efficient and earnest internes. We take pains to teach our internes, to place responsibilities upon their shoulders, and to assist them in making all kinds of operations. This produces a good service, and one that is desired. The eye and ear interne and nurse always should have an assistant interne and nurse, working under them, that stay on the service at least three months, and longer, if possible.

After a special interne and nurse have been secured, the next step should be to obtain a special ward with an up-to-date examination, treatment and dressing room, fitted up as efficiently as a down town office, so that all kinds of work, including refraction, perimetry, etc., can be thoroughly performed. At St. Lukes, for instance, we have our own ward of 20 beds, with their backs all to the windows, which is a most desirable feature in an eye ward, as it is important, especially after eye operations, that patients' eyes should not be unduly exposed to the light. This ward is quiet, and has a private hallway, washing and lavatory room, dining room and kitchen, and a beautiful examination room 20 feet long, by 10 feet wide. This room contains everything necessary for our work, and is a great inspiration to the attending staff, the nurses and the internes. The latter appreciate it particularly, for here is a place where lenses can be fitted, field of vision taken, nose operations performed, cases treated

and examined, etc. Besides our regular permanent nurse, there are two-day nurses, and one-night nurse, always on duty in this ward, under the direction of our interne and permanent nurse. Of course, we have the hospital laboratory and x-ray department always at our command. We still need a small female ward at St. Lukes, a few private rooms for our own use, and one or two special operating rooms, and these will come when our new building is erected on Indiana avenue. It has taken us years to build up this service at St. Lukes, but now we have something that is tangible, and enables us to do the best work with the least friction. It has, however, only been accomplished by persistent effort toward a definite goal, by demonstrating that it was a desirable and necessary reform, and through the unfailing assistance, and support of our efficient superintendent, who has always been our friend and willing co-worker. What we have done, others can do!

## THE TREATMENT OF VITREOUS OPACITIES \*

WESLEY HAMILTON PECK, M. D.,  
CHICAGO.

*The Vitreous Body.* The greater part of the interior of the eyeball is occupied by the vitreous body, which is situated between the lens and ciliary body anteriorly and the internal limiting membrane of the retina posteriorly. It is composed of a jelly-like substance, perfectly transparent, called the vitreous humor, invested with a delicate capsule known as the hyaloid membrane. The vitreous humor consists mostly of water with a few corpuscular elements and a small percentage of carbonate and chloride of sodium, giving it an alkaline reaction. It has a depression anteriorly, on which the lens rests, known as the fossa lenticularis, and a lymph space extending from the optic disk to the capsule of the lens. This is the canalis hyaloidens, its enlargement in front of the disk is the "area Martegiani" and behind the lens constitutes the "post-lenticular space." It is a lymph space and communicates with the anterior chamber and with the intervaginal spaces of the optic nerve. In fetal life it is occupied by the hyaloid artery, which sometimes persists in the adult.

## *Causes of Opacities in the Vitreous Body.*

Among the commoner causes of opacities in the vitreous may be mentioned the following: Choroiditis, iridochoroiditis, cyclitis, iridocyclitis, intraocular hemorrhages, injuries, myopia, retinitis, uveitis, anemia, loss of sleep, gout, syphilis, menstrual disorders, constipation, portal congestion, malaria, long-continued use of arsenic, senility, elderly persons with atheromatous arteries, hemorrhages after severe strains, excessive use of stimulants, leukemia, emphysema, dysentery, cholera (all varieties), metastatic choroiditis following puerperal fever, exanthematous diseases, influenza, microbic invasion from old operative wounds, tuberculosis, nasal accessory sinus disease, animal parasites, idiopathic inflammation, detachment of the vitreous, fatty degeneration of the vitreous and cholesterolin crystals in the vitreous. Cataracts and glaucoma are frequently complicated by opacities in the vitreous.

The diagnosis of opacities in the vitreous is a very important matter, as the vision may be entirely lost in patients who neglect to seek relief. These cases should be referred to the specialist promptly, as it is only possible to detect this condition and many of the underlying diseases of the ocular structures which causes it by the most careful and pains-taking ophthalmological examination. The opacities are of two varieties, fixed and floating, and present every conceivable size and shape, and when viewed by the ophthalmoscope appear as dark objects against the fundus, resembling soft coal soot or black moss. These masses when fixed in the line of vision constitute a serious obstacle to vision, while if situated to one side may not disturb the patient very much. I have found, however, that when the opacities are floating about with every movement of the eye the patients are greatly alarmed in some cases and in others much annoyed.

Various devices are resorted to in order to see them, such as the plane or concave mirror, strong or weak lenses, according to the depth of the opacity, and strong or weak light in certain cases will render them visible, also varying the distance from the observer to the patient will bring all the different parts of the vitreous into view, if the vitreous is otherwise transparent. There are sometimes a few leucocytes in the vitreous which cause entopic phenomena, but are not discoverable with the ophthalmoscope. Foreign

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



bodies in the eye, which it may or may not be possible to locate with the x-ray, I shall not stop to consider, as it would take more time to consider that one phase of the subject than is available for this paper. Sometimes the vitreous is so full of fine opacities that it is impossible to see the fundus. The view may be further interfered with by pathological conditions anterior to the vitreous in the lens, aqueous or cornea, or posteriorly by pns, tumors or exudates.

*Treatment.* All patients presenting themselves with opacities of the vitreous should be thoroughly refracted, preferably under atropine, unless there is some special contra-indication, to discover if there is any error, if so, its nature and extent. Frequently there will be found serious defects which have existed for a long time and were unsuspected by them. The most serious form of ametropia in relation to hyalitis is myopia of high degree, and myopic astigmatism, causing posterior staphyloma and myopic choroiditis, and fluidity of the vitreous. These patients should be accurately fitted for near and distant vision, and cautioned to avoid over-use of the eyes, as they are in imminent danger of detachment of the retina. These cases of synchysis greatly complicate the extraction of cataract. All these cases should not only have their errors of refraction corrected for near and far as indicated, but should have ultra violet ray protection for the retina if exposed very much to the bright sunlight or tungsten or nitrogen electric lights.

Hemorrhages into the vitreous result from traumatism, or bleeding from the ciliary body, retina or choroid as the result of diseased conditions, the blood penetrating the hyaloid membrane and mixing with the vitreous humor to a greater or less extent, depending on the amount of hemorrhage and the consistency of the vitreous. These extravasations of blood frequently occur at the time of puberty, adolescence, menopause and during senility with atheromatous conditions of the arteries. I have seen them occur in all these instances, as well as in nephritis, diabetes, syphilis, and anemia, the latter frequently also meaning a condition of lessened coagulability, the same we often encounter in anemic conditions, accompanying diseased tonsils and adenoids, where upon their removal hemorrhage continues for a long time without the slightest tendency to clot, instead of the normal period of three to five minutes.

The patient should be placed in bed, when practical, and given morphin to reduce the blood pressure (avoiding adrenalin); salines, in laxative doses given for a long time so as to avoid any necessity for straining; the eyes, protected from light and any unnecessary use; the blood should be thoroughly examined and Bland's carbonate of iron pills when indicated, and active antiluetic treatment instituted when justified by the clinical or laboratory findings. Iodid of potassium meets the double indication of increased pressure and absorption of the clots. In glaucomatous conditions eserine is advisable, as operation usually spells loss of the eye from further extensive hemorrhage. In recurrent hemorrhages, chlorides of calcium should be given for a prolonged period, as lime is absolutely essential to bring about coagulation of the blood. In robust subjects the application of leeches to the temple, or to the emissary veins of Santorini over the mastoid to drain the ophthalmic veins through the lateral petrosal and cavernous sinuses is sometimes invaluable. Three forms of animal parasites have been found in the vitreous, the cysticercus cellulose, filaria sanguinis hominis and hydatid cyst. It is important to differentiate them from persistent hyaloid artery, hyaloid canal and detachment of the retina. Having arrived at a diagnosis there is but one thing to do, and that is to remove them, first having obtained the consent of the patient to removal of the eye if the effort fails. The best prophylactic measure is to avoid eating raw meat or permitting dogs to lick the hands or face.

Crystals of cholesterol, tyrosin and phosphates occur in the vitreous humor and are known as synchysis scintillans and appear as innumerable bright specks upon ophthalmoscopic examination. They no doubt are the products of faulty pancreatic and hepatic metabolism. I have not observed that they interfere with vision, and there is no known remedy for them.

Perforating injuries of the vitreous with the introduction of infection resulting in suppuration usually calls for enucleation to forestall sympathetic ophthalmitis. Retained foreign bodies almost invariably result in atrophy of the globe or suppuration, hence should be subjected to attempted removal at least as a precautionary measure.

Nasal accessory sinns disease, infections of the

tonsils and adenoids and pyorrhea and abscessed roots of teeth and, in fact, any focal infections may secondarily cause disease of the nerves, lymphatics and blood vessels of the eyes and result in vitreous opacities. Accordingly they should all be subjected to a thorough examination and proper surgical measures resorted to in order to relieve the condition.

The inflammations of the ciliary body, retina and choroid accompanied by exudates and vitreous opacities should be treated by the instillation of atropine, dionin, iodid of potassium, laxatives, sweats with pilocarpine and Turkish baths, protection from too bright illumination from the sun or artificial lights, subconjunctival injections of cyanide of mercury or normal salt solution, diuretics (of which acetate of potash is one of the best), iron, quinine and strychnine to improve the blood and general nutrition. Many patients will require a prolonged course of treatment, extending over several months or years, before the opacities in the vitreous are entirely removed, as I have demonstrated in some very grateful cases in whose eyes there were many floating and fixed bodies, and that are now perfectly transparent and free from them.

31 North State Street.

#### (ABSTRACT)

Dr. Harry Woodruff (of Joliet) thought that the most interesting point to the oculist is a moderate amount of vitreous opacity, where the vision is not very seriously disturbed, in people beyond middle life in which probably the same pathology holds as holds for beginning cataracts.

He does not believe that subconjunctival injections of salt solution have much influence on those conditions, but those people should be thoroughly examined as to their general physical condition, also their teeth and tonsils should be thoroughly investigated and receive attention.

He has prescribed a 2 per cent. solution of iodine and sodium used with an eye-cup, the same treatment which is recommended by Dore for beginning cataracts.

Dr. Tydings (of Chicago) believed the main idea is that vitreous opacities are the local expression of systemic disorders, which must be eliminated. The eye-washes are only of elementary aid. The systemic conditions are the ones to be met. As a local remedy he uses the cyanide of potassium, one to three thousandths, using it hypodermatically, as advocated by Smith in the treatment of beginning lens changes.

Dr. Peck (closing): The remarks of the gentlemen are absolutely correct. The main thing that has impressed itself on me in recent years is the fact that

a great many of these cases can be cleared up by persistent treatment. I have several cases now that have cleared up, but it has taken a long time. I don't believe it is possible to clear some of those cases in short order. The important point that I wanted to impress is that in order to clear up some of these cases, where they have large masses, it requires perhaps two or three years to do it. It is impossible to remove them in a few weeks.

### THE IMPORTANCE OF AFTER-TREATMENT OF THE TONSILLAR FOSSA DURING THE SECONDARY PERIOD FOLLOWING TONSILLECTOMY\*

C. F. BURKHARDT, M. D.,  
EFFINGHAM, ILL.

My investigation of the literature upon the after-treatment of tonsillectomy has failed to reveal anything of importance upon the treatment of what I term the second period of the post-operative course, especially emphasizing it as a routine measure. If this be an erroneous statement I humbly offer an apology to the wronged author. There is an abundance of advice to guide us as regards the first or primary period, which extends from the time the operation is completed until about the tenth day thereafter, and few authorities upon the subject give us but little upon this part of the treatment beyond the fifth or sixth day.

This first period is what might properly be called the hemorrhage, gargle, spray, etc., period, the chief objects of which are to cope with hemorrhage, relieve pain and guard against septic infection. I do not wish to be understood as considering this first period of after-treatment unimportant; but, conversely, I consider it of the most vital primary importance, for upon its skillful application depends the lives of our patients.

My personal care and observation of more than five hundred tonsillectomies, which I have performed at St. Anthony's Hospital, and the examination of the throats of other patients that have come under my care, who had had their tonsils removed by some of the best laryngologists in this country, has convinced me of the necessity of establishing and carrying out fully a course of secondary post-operative treatment of the fossæ. This I have been doing with good ultimate results for the past two years.

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



This secondary period of post-operative treatment, according to the plan I have adopted, begins at the end of the first or primary period, or ten days after the operation, and continues from two to six months, depending upon the conditions of the fossæ that may arise; and there are some rare cases which should be inspected a year or more after operation.

Now it is not my object or desire to raise any undue excitement or discussion in this section, or to wound the pride of any of my friends in this field of specialization, by stating that I care not what method or technic is employed in the removal of the tonsil (we all agree that it should be removed within its capsule and that the pillars should be uninjured), or by whom the operation is performed, that in a large per cent of these patients, if their fossæ are examined within a few months or a year after operation (unless the plan of secondary treatment and observation of the tonsillar fossæ, which I will later outline, is applied as a routine measure in every case), there will be found in the tonsillar fossæ abnormal growths, consisting either of nodular masses of granulations or tonsillar tissue, and in some cases both.

The most frequent location of tonsillar tissue is at the base of the fossæ, which in some cases is transplanted there from the lymphoid tissue in the root of the tongue (unless it has been left by the operator), also in the superior portion up and under the plica. Nodular masses of granulations are most frequently to be found upon the pillars and in the depth of the fossæ. I am pleased to be able to state that I am not alone in this opinion, as regards the fact of the return of tonsillar tissue in the fossæ being possible, and not only possible, but very probable, and occurring, unfortunately, with too great a frequency for the good of our reputations as laryngologists; and the sooner this error is removed from our minds, and the laity is told the whole truth about this matter, that is, there is a possibility of the return of this tissue if the throat is not properly treated after operation—the better our position is going to be before the public, and it will also put an end to our uncharitable conduct towards our brethren in this line of operative work, by ceasing to tell the patient of the other fellow, who comes to us, that all tonsillar tissue was not removed. This is unfair, as we know by absolute clinical evidence that in some cases, where the

capsule is removed in toto, by a smooth, clean dissection (by whatever method suits the operator), we may have return of lymphoid and granular tissue. Of course I am ready to admit that the better the technic and more care employed to remove all the capsule, and leave a clean, smooth fossa with pillars unimpaired, the less the liability of secondary growths; but, as there is a liability of such a condition taking place, even when the utmost care is exercised by the operator, we should take no chances in this matter, but should keep all cases under our personal observation until we are reasonably sure that the result is a clean fossa.

The contention which I make as regards the after conditions or results which may sometimes be found in the tonsillar fossæ following tonsillectomy is fully substantiated by the report of the study of the after results following 571 cases of tonsillectomies, reported by Dr. John C. Simpson, of Norristown, Pa., in the *Journal A. M. A.*, April 1, 1916. These cases were not operated on by Dr. Simpson, but by Drs. Gibbs and Stauffer. The post-operative range covered a period of ten years; the average time since operation was three years.

Now bear in mind that these cases, according to Dr. Simpson's report, were all tonsillectomies, and not tonsillotomies—and his statement with reference to the fossæ is: "Presence of tonsillar tissue after operation—a slight amount was noted in 183 cases, while in 72 cases enough was present to be considered as hypertrophy. The remaining 316, or 55.25 per cent, gave no evidence of tonsil present." Are not the facts brought to our attention by the above sufficient to cause operators upon the tonsil to sit up and take notice, as, according to the report only 55.25 per cent. of the operations were a complete success, and 44.75 per cent fell far short of our ideal standard of efficient results—a clean fossa?

Dr. Chas. J. Whalen of Chicago, in a paper entitled "The Tonsil—Its Medico Legal Aspect," *ILLINOIS MEDICAL JOURNAL*, September, 1916, gives his opinion upon the probability of lymphoid tissue returning in part, as follows:

As a result of experience along lines indicated, I have arrived at the following conclusion: First, that no matter how skilful the operator, it is impossible, by any method known at the present time, to remove every particle of lymphoid tissue in either the pharynx or fauces. Second, that the remaining particle of glandular tissue, be it even microscopically small, is

capable under certain conditions of assuming a degree of hypertrophy equal to the original growth. Third, that under favorable conditions, in a certain percentage of operative cases, a secondary hypertrophy of the lymphoid tissue in the pharynx will occur, no matter by whom the operation is done, or how thoroughly he may think he has removed all glandular tissue.

It seems difficult to understand why so important a phase of tonsil surgery has been so long practically neglected; and more especially is this true when we consider that the major number of tonsillectomies are at the present time performed for the primary object of removing dangerous foci of infection, which may be responsible for diseased conditions in organs remote from the tonsils, by metastatic infection; and it is self-evident that a tonsillar fossa which does not remain clear of tissue capable of incubating infection cannot possibly give the best results.

Dr. F. Buckmaster, of Effingham, Ill., in a paper entitled "The Tonsil in Its Relation to a Series of Infection Sequences," *ILLINOIS MEDICAL JOURNAL*, September, 1916, states that he views this subject from the viewpoint of the general diagnostician and general surgeon, and refers operative tonsil work. In his paper he places special importance upon having a clean fossæ, as the following will indicate: "These cases must be followed up, remaining pieces of tonsil removed, granulating surfaces cauterized, epithelialization stimulated, etc., until the fossæ are completely healed in and the surface rendered non-absorptive."

The treatment for the secondary post-operative course which I have adopted and have been using during the past two years as a routine treatment consists in first impressing upon my patients, when they leave the hospital, the importance of carrying out a regular routine course of after-treatment—explaining to them that while growths do not in every case return, that there are some cases in which they do, and if they wish to be assured of good results they must report at my office from time to time for examination and treatment if necessary. I find by this method I can keep my patients under observation for as long a period after operation as I deem necessary.

If I find upon examination of the fossæ, at the end of the second week following the operation, nodules of lymphoid tissue, or masses of granulations, I destroy them by touching with a

small thermo-cautery point; I have three points, with different angles, in order to better reach all parts of the fossa. If there is any great amount of surface to be touched I treat only a part, waiting until the next treatment to treat the remaining parts. If we include too much area the reaction may cause too much discomfort.

I am very careful that no injury is done to the normal parts. In treating some patients I find it necessary to use someone as an assistant to depress the tongue. I have patients to report at my office about every week, and, if I find it necessary, I continue the cauterization until all abnormal growths are destroyed. In the majority of cases requiring cautery treatment one treatment is sufficient, but there are some cases which require three or four treatments, covering a period of six weeks or more, and in very rare instances I find growths springing up four to six months or more after operation.

These cauterizations should not be given much closer together than one week, as the reactions should be allowed to subside before a second application of cautery, for, if the interval between treatments is too short, the treatment will be more painful and less effective, as the operator is unable to know what results he has obtained from the preceding treatment, i. e., how much tissue was destroyed, until all reaction is over and atrophy of tissue complete.

To render the cauterization practically painless, I use a ten per cent. solution of cocain on a cotton swab, taking care to squeeze out all superfluous solution, and apply it to the point or points to be cauterized. Two applications are made five minutes apart, waiting from three to five minutes after last application before beginning. After the period of cauterization is completed, and the fossæ are absolutely clean, I insist upon the patient reporting to me about once every month up to the end of the sixth month after operation. I realize it is difficult to get them all to do this, but quite a number will. Of course I realize that cauterization of the tonsillar fossæ is practically impossible in children under ten years of age, but in this class of cases, nodules, etc., are removed by the punch, or, if the nodules are small, by touching them with a fused point of silver nitrate, repeated if necessary until they are completely destroyed.

I believe that the general adoption of this method of treating our tonsillectomies would re-



duce imperfect results to a very small percentage of our patients, as the reasons for the large percentage of imperfect after results, at the present status of tonsillar surgery, can be traced to two causes—first, to poor technic, and second, those in which the technic has been good, but the after care of fossæ has been neglected.

My technic of operation I believe is at least up to the average standard usually maintained, but nevertheless I find it necessary to treat by cauterization about fifty per cent. of my patients.

I desire in closing to say that I consider the growing tendency, which confronts us today, is that this operation is too often regarded as being in the class of minor operations—about on the same plane as an operation for a furuncle. This opinion we find not only in the minds of the laity, but among the general practitioners (and I regret that I am compelled to say among many good men doing this line of surgery). We should, perhaps, be charitable toward the "all-around specialist," but it is difficult indeed to understand why men who should know better will handle a tonsillectomy with so much indifference as regards the after care.

The operation is being performed in the office, in the home of the patient, or in any other place that suits the peculiar whims of the patient. This, to be sure, saves hospital bills and enables the operator to thereby better compete in the matter of cost with the operator who is doing his surgery of this character under the proper conditions and safeguards, viz., in a well equipped hospital.

Every tonsillectomy should be approached with the same degree of care, and treated with the same dignity as any other major operation, which it truly is; and when this view and plan of the operation is generally adopted, and all operations are performed in hospitals, with proper equipment and trained assistants to aid the operator in making use of his best skill, following the plan of after treatment which I have endeavored to make plain, there will be a great many more good, clean fossæ.

#### DISCUSSION.

Dr. Bergeron (of Chicago) thought the way that most of us have done this tonsillectomy until very recently has been deplorable. Now, for the most part, the fundamental principles are being observed, that is to say, the resistance of the patients is being considered, the bleeding is minimized.

He then exhibited his recently devised forceps for the purpose of controlling the hemorrhage, primary and secondary as well, which eliminates the necessity of going into the cavity with sponges or ligating the bleeding.

In every case those forceps, properly applied, will eliminate bleeding absolutely.

Dr. Holinger finds that the application of a little iodine of potassium solution, the usual Mandel solution, about the sixth or seventh to the tenth day after the tonsillectomy is liable to clean out the cavity much quicker and leaves a nicer result.

He has used the forceps of Dr. Bergeron any number of times with very satisfactory results.

Dr. Tydings (of Chicago) has used Dr. Bergeron's instrument, but had one accident, a perforation of the anterior pillar.

He has not found it necessary to follow up the course of treatment as long as Dr. Burkhardt has, but has examined later many of the tonsillectomies and the results have invariably been satisfactory.

Dr. Cavanaugh (of Chicago) has seen men using Dr. Bergeron's instrument who don't know how to use them. There is absolutely no danger of perforating any pillars if you use the instrument correctly. They are supposed to be applied deep and grasp the muscles deep, not the edge of the pillars.

He asked Dr. Burkhardt how old these patients were at the time the tonsils were removed, in cases where glandular enlargements returned.

Dr. Tydings: I applied the forceps just as you suggested. I went down as deep as I could, but I got a perforation of that pillar.

Dr. Burkhardt (closing): I am somewhat disappointed that another matter has been injected into the discussion, that is, the instruments, although they are very good. What I mean is that it may have detracted from the point I wished to bring out, the part secondary treatment.

I wish to say, in answer to Dr. Cavanaugh's question in regard to my method of removing the tonsils, my method is a method that I saw him use years ago, and I have never seen any reason to change. I learned to take a tonsil out within its capsule, and do a good, smooth, clean job, and the longer I do it, the better I think I can do it. I believe all of you have had that experience.

To begin with, I use an ordinary Kyle's crypt knife, and with that, in conjunction with the curved knife, I believe it is Dr. Tydings' knife, I get my tonsils well dissected loose from the pillars, doing no damage to them. When I feel that the snare will go freely down over what we might call the equator of the tonsil, I remove it with Tydings' snare. I think I can show as clean work as most any of you. I don't want to boast, but I think I do it pretty smooth. But, even the smoothest cases that I have had, those cases that I just prided myself on as being some of the best, where the capsule was absolutely all removed, have been the cases, (some of them) that afterwards I found that I had a little bit of nodule springing up in the fossa.

While Dr. Tydings may think that all cases are absolutely clean—I am not going to say they are not, but I believe all of you will find some things that will surprise you if you look into some of those fossæ six months or a year after your operation.

Of course, I had quite a number of children, and, while I didn't classify them, I would say, however, that the vast majority were adult cases.

Dr. Tydings: I would suggest to the doctor, in removing the tonsil, when you go down to the end of the tonsil and make your lower incision, do it so as to include the whole of the tonsil. In a few cases I have seen hypertrophy of that sub-tonsillar tissue.

### SOME OBSERVATIONS ON THE DECOMPRESSION OPERATION ON THE HYPOPHYSIS BY THE NASAL ROUTE.\*

OTTO J. STEIN, M. D.,  
CHICAGO

In working in any comparatively new field of surgical endeavor various problems arise that, with further experience, become simpler in their performance and less complicating in their results.

The operation for the decompression of the pituitary body may be carried out by several different routes, the trans-temporal, the trans-frontal and the trans-sphenoidal being the usual ones followed. The first two are not considered in this paper. The trans-sphenoidal route has been used in several different ways, namely, through the mouth, through the antrum of Highmore, and through the nose. The nasal route as originally carried out was a most serious and radical performance. The earliest operators, like Schoffler, Eiselberg, Proust and Ollier, commenced with an external excision about the nose, either turning it to one side or upward or downward. This was followed by the removal of most of the structures within the nose, including the turbinates, septum and ethmoid cells. Later, particularly following the work of Oscar Hirsch, this sacrifice of important structures was found to be not only unnecessary, but also harmful. The technique as now employed through the nose gives ample room for working with the minimum of tissue loss and to the rhinologist, in particular, the operation offers an exceptionally favorable avenue by which to approach the floor of the sella

turcica. If he is skilled in the performance of submucous septal resection, he can with facility and rapidity open widely into the sphenoidal cavity, which then gives him easy access to the sella floor and the gland that lies within. With this perfected knowledge of the anatomy of this region and of the variations and anomalies that may be expected, the rhinologist is particularly fitted for this operation.

The general surgeon, when following the nasosphenoidal route, usually commences his incision external to the nose. Kanavel incises the upper lip around the alae. Cushing incises beneath the lip at the labiogingival junction. In following the antrosphenoidal route the incision is made at the labiogingival junction. Both Citelli and West commence their resection of the septum further back and do not attempt a submucous procedure.

The criticism to these various methods is the greater likelihood of infection following operation, besides the necessity of removal of considerable tissue, much of which is functionally important, and the removal of which later produces distressing symptoms. In many of the operations as carried out by the general surgeon systemic anesthesia is used, which adds seriously to the case and is unnecessary. I believe the ideal anesthesia to be morphin-hyoscin or scopolamin-morphin, with flake cocaine locally on the septum and sphenoid. I would offer a suggestion and sound a note of warning regarding the preparation for anesthesia. A careful and reliable examination of the urine for evidences of oxybutyric and diacetic acids and acetone should be made in all cases to avoid the possibility of acidosis developing after operation. A reasonable food consumption should precede the operation, for dieting or fasting may develop this condition. Also hurried operations should be deprecated. The only case I lost from operation of this kind was of this nature. In brief, it was as follows:

A man forty-seven years of age, having only central vision, blindness commencing two years before, both fundi showing beginning peripheral atrophy; headaches; no perverted pituitary symptoms. Owing to certain circumstances no routine physical examination including urinalysis was made in the hospital. He was operated on by request without any previous observation aside from a preliminary nasal inspection. Scopolaminmorphine and cocaine anesthesia. The patient dozed throughout the operation. On entering right sphenoid encountered a cyst which did not rup-

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



ture until I entered the left sphenoid. Two drams or more of straw colored fluid, slightly blood stained, escaped. All of the floor of sella was absorbed from pressure by the cyst. The operation was the simplest, quickest and easiest of my operations. No tissue was removed. The patient had a restless night, vomited constantly, severe headache, temperature at first 97.8, pulse 80, later temperature rose to 102.8. A condition of acidosis was diagnosed from the symptoms of vomiting, pulse, headache, urine examination and breath. *Exitus letalis* occurred on the second day following operation.

Ordinarily a diagnosis of these cases is established by a trio of symptoms, namely, headache, involvement of vision, and perverted physiologic pituitary function, plus the Roentgenographie findings. The Roentgenogram, if correctly taken and understandingly read, is valuable both to the operator and the diagnostician, but especially to the operator, because it furnishes him with evidence of capacity and dimensions. A good picture will show the size of the sphenoidal cavities, a widening and deepening of the sellar floor, even a shadow outline of the glandular mass if it has already invaded the sinus, a thickening or a thinning of the bones at the base of the skull; enlargement or absorption of the clinoid processes and an increase or decrease of the diaphragm opening. This knowledge is of supreme importance to the surgeon, because of the variations met with in the size, shape and position of the sphenoidal sinus, as well as in the thickness of its walls and the relationship of adjacent parts, like the posterior ethmoid cells, the optic nerves and the carotid arteries.

In any series of normal head sections some divergence will be found in the anatomy of this keystone bone. Ordinarily the floor of the sella presents at about the superior posterior angle of the inner wall of the sphenoid cavity. A distinct promontory can be seen in the center, indicating the most dependent part of the pituitary fossæ. The bone at this point is usually quite thin and easily broken through. Many of the descriptions of this operation do not describe this part of the operation with sufficient clearness or detail. The promontory indicating the floor of the sella may be absent, and in place of a convexity, either a straight or even a concave wall may present itself. Now, if you were to follow the directions given by some authors to enter through the roof or by that of others to perforate the posterior wall, you would, in some instance, enter the anterior cere-

bral fossæ or the middle fossæ, jeopardizing the chiasm and the cavernous sinus. Occasionally one finds a hard and thick wall in the region of the promontory. This makes progress slow, and besides, adds uncertainty to the work. In one case of cadaver operation, I found a large posterior ethmoid cell interposed between the sphenoid cavity and the sella, which, of course, had to be broken through first before one could enter the fossæ. Onodi, in his work on sinuses, has shown several variations of this kind. But whatever anatomic condition may be present it is always necessary for the operator to keep working in the median line to escape injury to nerve, artery and cavernous sinus. This in itself is a strong argument in favor of the septal route. You are always working in the median line from the beginning, and that spells safety first. One of the advantages of working submucously is that the entire operation is confined between two mucoperiosteal flaps, and with proper aseptic technique these flaps can be brought together at the final, thereby avoiding any danger of after infection. A case bearing out one of the variations met with was where headache was the chief symptom, and in which no eye symptoms were present. The Roentgenogram showed a depressed sella with a lengthened anteroposterior diameter. The optic chiasm most likely escaped pressure from the growth on account of its posterior position. Right here a fallacy in many books on anatomy can be exposed: That is the optic groove, which lies anterior to the pituitary fossæ, is said to lodge the chiasm which then passes from either end as the optic nerve into the optic foramen. This would give the nerve almost a right angle course. But in reality the chiasm lies further posterior, presenting its anterior border at the posterior part of the gland, and the two optic nerves lying to the side. Most of the tumor cases involve the anterior lobe first, and in their growth seem to meet resistance least at the floor of the fossæ. The diaphragm above appears to offer greater resistance to the tumor growth than the bony floor, the bony clinoid processes before and behind and the firm dural reflections with the cavernous sinuses on the sides. One other weak point besides the floor of the fossæ is the infundibular which connects the pars intermedia with the third ventricle. Along this path cysts are likely to develop. A case of this type was reported by

me over two years ago. The patient made a complete recovery of all focal symptoms like headache, blindness and vertigo, after a trans-sphenoidal decompression, and in which the gland was adenomatous and filled the sphenoid cavity. After a year headache and vertigo began to return and four months later she died. Autopsy showed the gland greatly enlarged, filling the sphenoid sinus as well as forcing the diaphragm up in front of the chiasm. Connected with the infundibular was a cyst the size of a walnut that invaded the dilated third ventricle. This shows the two types of pathology in one case. The adenoma appeared first, later the cyst. Had the cyst been recognized latterly it might have been drained, but as Cushing said in a letter to me about some of his cases, "Cysts, even if exposed and evacuated, tend to refill with return of the pre-existing visual defects." But these variations should never deter the surgeon from following this route of operative procedure, because with the knowledge of these variations and a good radia picture he can always proceed with confidence.

#### DISCUSSION (ABSTRACT)

DR. HOLINGER would like to hear more about the question of infections which is treated very cursorily in all the treatises.

About two years ago, one of the gentlemen read a paper in Chicago and reported a very limited number of deaths. At the same time he knew of two deaths that had happened to him which he had not reported at all. Of course, needless to say, this is not in regard to Dr. Stein. This man had previously injected the patient with streptococci serum, and the patient died from pneumococcus meningitis.

DR. BECK (of Chicago) has accepted the teaching that the nasal route is the best means of operating on these cases, in that it is easier, quicker and there is less danger from infection. It is a cleaner cavity. No matter how well you resect the septum, the place through which you work is the size of your nasal opening, whereas through the cavity in the anterior wall of the superior maxilla, you can make it as large as you please. The distance is markedly reduced, and you see so much better in this shorter distance and have a larger exposure.

Another thing, to remove that portion of the septum that is against the sphenoid, to throw the two sphenoid cavities into one, is some job. His three cases on the living were all done through the nasal route. All were pure cases of hypophysis tumor and cyst; all were clear eye cases with blindness and headaches, and all are living and have recovered a sufficient amount of vision to warrant the operation. None of them have recovered completely.

Again, the nasal route will not suffice for quite a

number of cases that are not of that portion of the hypophysis that can be reached through the sphenoid. There are intracranial hypophyseal tumors, that is, the tumor grows into the brain proper, and, of course, we will have obstructions. It stands to reason that to attack such a case by any other route except by the Cushing transtemporal route would be suicide.

DR. EDWARD F. DIXON finds two objections to any intranasal operation that has been given. One is the matter of infections, and the other is, as Dr. Beck said, some of the tumors grow up toward the brain. Now, to obviate the matter of infection, the submucous operation comes the nearest to doing this of any of them. Cushing's operation adopts that plan as well as Hirsch's, but Cushing instead of doing the ordinary submucous makes his entrance through the lip and the mouth, as Dr. Beck does. Both of those are exposed to whatever infection there might be in the mouth.

He described his own modification of Cushing's operation as going in over the lip instead of going under, resecting the septum submucously, not as Kanavel biting it out. So, in that way, you are working entirely in an aseptic field.

DR. STEIN (closing discussion): In spite of the remarks made by those who have discussed this paper, for which I thank them very much, I still maintain that the septal route intranasally is the route preferable for reaching this region for a decompression operation, regardless of whether there is a tumor, a so-called neighborhood tumor, that may frequently exist, and you can't always tell beforehand whether it is present or not. The decompression is there just the same. These cases are all serious cases. They are probably going to die anyhow, and you get relief, you get benefit and you get a percentage of cures. I claim that the nasal route is as aseptic a route as you can possibly get. I think it is far more aseptic than the mouth route, which we always consider a septic avenue to enter the head. You can get a clean field, and you can close that field by bringing your flaps together without any fear afterwards of infection following. Of course, it is not impossible that there will be infection, but with the ordinary care that one would take in such work, I don't think it is likely to occur.

---

#### MANAGEMENT OF MALIGNANT DISEASES OF THE UPPER RESPIRATORY TRACT.\*

JOSEPH C. BECK, M. D.,  
CHICAGO.

Ordinarily speaking, this would refer to the two conditions, namely, sarcoma and carcinoma, but in a stricter sense of the word it refers to any pathological condition that progresses towards

---

\*Read at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



a fatal termination in spite of treatment, usually spreading rapidly. Such other conditions as endothelioma endovascularis, angioma progrediens fulminans, chloroma, cholesteatomata, malignant syphilis, scleroma, actinomycosis and tuberculosis must be considered as malignant diseases.

It is impossible, even in the briefest manner, to describe each of these conditions in the time allotted to this presentation, nor was it my purpose to do so were the time unlimited. I wish to give a resumé of my own experience with sarcoma and carcinoma about the head and neck, with particular reference to the final or end results. That word final, in this last sentence, could easily be replaced by fatal, because it is well known to all of you that in so far as the carcinomas of the nose, mouth and throat are concerned, they invariably terminate fatally, no matter what form of treatment is employed. In spite of these discouraging facts the medical profession is putting forth its untiring efforts to change those conditions. Therefore, speaking specifically to the subject of management, we should consider certain factors, which, however, are subject to differences of opinion, as the basis of a possible discussion.

*First.* All who are interested in the subject of cancer should become members and co-workers in the society organized for that purpose, namely, The American Society for the Control of Cancer. All matters pertaining particularly to the education of the public in the possibility of prevention of this malady as well as the early recognition both by the laity and the general practitioner are its most important duties. The censoring of case reports, as well as the control of the scientific journals of laboratory work of cancer is no small part of its duty. Finally the treatment of cancer.

*Second.* The earliest possible diagnosis is to be followed immediately by the most radical intervention. This does not always mean surgery.

*Third.* All points of irritation, such as fissures, chronic inflammation, stones, non-malignant growths, foreign bodies and jagged edges are to be looked upon as precancerous states, and should be corrected.

*Fourth.* When a malignant growth has assumed the proportions of a metastatic growth or involved the neighboring tissues to such extent as

to make life unbearable, were the cancer removed, then in such a case palliative treatment is indicated and the limit of that wonderful remedy, morphine, should be given so as not to have the patient suffer any pain.

*Fifth.* However, should the growth be ever so large and so completely involve the neighboring structure as to probably leave a large defect in appearance as well as function, and furthermore, should the procedure appear to be so formidable as to offer only a small chance of a permanent cure from the cancer, it is our duty, I believe, to give such patients that chance and operate. I claim that one case in one hundred that will recover following such heroic measures is one hundred per cent of cures, because without that procedure the patient would succumb to the disease.

*Sixth.* In the removal of particles of tissue for microscopical examination, it must be borne in mind that cutting into a malignant growth will frequently aggravate the process or endanger the healthy, neighboring regions from implantation of cancer cells. Consequently Dr. Bloodgood has recently recommended the use of an electrically heated knife which will prevent that difficulty and yet not spoil the tissue for correct microscopical diagnosis.

*Seventh.* The follow-up system of cancer cases is of the utmost importance and the cooperation of the medical profession in making this of practical value is absolutely essential. The word cure of a case of cancer in a report should be well fortified by all the scientific proofs of a diagnosis as well as the time limit. It must be remembered that there are early and late recurrences. The accepted time limit of malignant disease of the upper respiratory tract, including the mouth, is five years.

*Statistics.* The number of cases observed and treated by me, and of which I have complete reports, including the follow-up system in the majority, since 1895, are 143.

I have, without a doubt, seen again as many cases in clinical, dispensary and charity hospitals, as well as in consultation, of which I have no records, consequently of no value statistically. Suffice it to say that some of the sarcomas lived, while almost all carcinomas died.

I will divide them primarily into:

(a) Sarcoma.

(b) Carcinoma, without any reference to the type as to the cellular pathological entities.

#### SARCOMA.

*External Nose.* Two cases, both terminated fatally, although one case lived five years, during which period four operations were performed.

*Intranasal,* including the sinuses, eleven cases; all operated upon; eight followed up to a very recent date; five of these eight cases have now some sarcomatous tissue present, three are cured.

*Nasopharyngeal.* Nineteen cases, all operated upon. Seven followed up to a very recent date. Four died between the third day following the operation and the second year after. Eight cases not possible to locate.

*Tonsillo-pharyngeal.* Three cases, all died; one operated on and died six weeks after. The other two grew so rapidly that death ensued within a month.

*Alveolar-palatal.* Two cases. Both alive and apparently cured. One operated on four times, the other treated by massive radium.

*Mandibular.* Two cases, both died in spite of radical operation, although surviving these for several months.

*Lingual.* One case, alive, apparently cured by operation.

*Laryngeal.* One case, still alive and under treatment by massive doses of radium having been operated on four times previously.

#### SUMMARY—

Total number of sarcomas, forty-one.

Total number accounted for at recent date, thirty.

Total number of deaths, eleven.

#### CARCINOMA

*External Nose.* Epithelioma. Twelve cases, ten operated upon, two treated. All followed up to recent date. All lived without recurrence. Five died (from intercurrent diseases several years after treatment; no post mortem having been obtained in any of them).

*Intranasal,* including the accessory sinuses. Seven cases, three operated upon, five followed up to recent date. All dead.

*Alveolo-palato-pharyngeal.* Thirty-nine cases; eighteen operated upon. Twenty-four followed up to recent date. Two alive, one eight years and the other three years since operation. The remaining twenty-two cases are dead.

*Lingual.* Seven cases; four operated upon, six followed up to recent date. One still alive, now three and one-half years since operation. The remaining five cases are dead.

*Laryngeal.* Thirty-seven cases, thirty-four operated upon, twenty-six followed up to recent date. Of these five are still alive and apparently without any recurrence. The procedures were three laryngeotomies, eight years, five years and three months since operation; one laryngeal fissure, five years since operation, one by indirect laryngoscopy, now eleven and one-half years since operation. The remaining twenty-one cases are all dead.

#### SUMMARY—

Total number of carcinoma cases, one hundred and two.

Total number followed up to recent date, seventy-three.

Total number still alive, twenty-one.

Total number dead, fifty-two.

In conclusion I wish to report four cases of malignancy of the larynx. I would further say that in so far as the management of the malignant conditions outside of the sarcoma and carcinoma that are mentioned above there appears to be nothing gained by surgery. Deep x-ray, massive doses of radium, high voltage of diathermia, Finsen rays, sun rays and salvarsan all have some influence.

#### FOUR CASE REPORTS

*Case 1.* Mr. R., 54 years old, married, three children, many years waiter and in saloon business. Has always been well except for hoarseness until eight months before presenting himself, when he noted considerably more hoarseness from which he never recovered in spite of treatment by specialists. He had received thorough antiluetic treatment on general principles or as a therapeutic test without any results. This hoarseness soon developed into a marked type with some embarrassment in respiration. He had lost some in weight, but had no pain upon swallowing.

*Examination:* Somewhat emaciated looking man, but bodily examination shows him to have fair musculature and plenty of fat. The physical examination was negative. Blood examination showed a two plus Wassermann, but the Abderhalden was negative, as to carcinoma. Sputum negative as to tuberculosis.

*Nose.* Indicative of a sinus trouble or atrophic rhinitis.

*Larynx.* Considerable difficulty in inspiration, making quite a marked noise and very hoarse voice. Inspection revealed a thickening on both cords, particu-



larly the left. It appeared as though there might be considerable thickening subglottically. The diagnosis pointed to a luetic condition with a possibility of a rhinoscleroma. I determined to do a suspension laryngoscopy in order to examine below the cords and also take out a bite of tissue for microscopical examination. While doing this suspension or following the action of the cocaine locally, the patient became suddenly very short of breath and cyanotic, so that I was compelled to do a hurried tracheotomy. That was all the treatment for about two weeks. He had now recovered, in fact gained some in weight. It was now possible to make the suspension laryngoscopy and removal of tissue. There was considerable thickening below the cords and the removal of a bit of this tissue showed it subsequently under the microscope to be a squamous celled carcinoma. One week later a laryngotomy was performed and the growth removed from within the larynx in the following manner:

Under ether anesthesia through the tracheal canula, an incision was made with the ordinary instrument down to the thyroid cartilage.

The parts were widely retracted. By means of the Percy cautery the thyroid cartilage was scored in the median line. An incision was made through the cartilage with Jackson's scissors. The thyroid cartilage, now split, was widely retracted. By means of Percy's small knife the entire intralaryngeal mass was cooked without any cooling externally or within the esophagus. This was accomplished by periodically laying the heated point against the tissue and waiting until one heard a sort of a hissing sound, but never permitting the tissues to become charred or burned. This procedure required about thirty minutes. It was found that some of this thickened tissue appeared to go down into the cricoid region, so concluded to communicate the tracheal opening with the laryngotomy, also by the aid of the Percy knife. The interior of the cricoid and tracheal region was similarly treated by the Percy heated point, as above. An up-and-down Jackson tube was put in and the laryngotomy dressed wide open to promote the throwing off of the slough.

The patient had not much of a reaction; in less than two weeks was fairly clean. At the end of one month the tube was left out and the wound allowed to close. For about three weeks the patient breathed well and had a very fair voice, then he began to show evidences of breathing with some difficulty. At the end of two weeks he had to be reopened, which was very easy, and a tracheotomy tube inserted. It was decided to wait any recurrence before attempting further treatment to establish normal breathing through the larynx. After about six weeks' observation, showing no evidence of recurrence of carcinoma, I decided to employ an intubation tube, which has given me excellent service in treatment of laryngeal strictures from other causes. A piece of tissue removed for microscopic examination proved again to be negative. This tube was allowed to remain for about two weeks, when he showed some evidences of pain in swallowing. On

removing this tube, I found that it had produced a decubital ulcer on the lower posterior wall of the trachea. The result from this intubation was very satisfactory, but the laryngotomy wound was kept open nevertheless in order to observe any recurrences. It soon began to contract down so that we were compelled to dilate from below by means of sounds.

Conclusions in this case October, 1916, were:

(1) That he is possibly cured from carcinoma of the larynx.

(2) That Percy treatment without cooling apparatus produces greater cicatrization than when it is employed as will be shown in a subsequent case.

(3) That there may be an element of lues in the case, that is to say, both diseases may be present.

(4) That tubes should not be left in situ without examining for possible decubitus ulcerations from pressure. The result from this mode of dilatation is, however, not promising in this case, because after a few moments the larynx opening closes down and the tracheotomy tube must be again inserted. It is my opinion that he will have to wear an up and down tube or an intubation tube for a much longer period, and if after that it will not remain open then he will have to wear a permanent tracheotomy tube. In that case he would be given one that he could close by the aid of the shuttle operated from his pocket.

*Subsequent course.* About one week after the above date (Nov. 16) the patient showed evidences of great difficulty in swallowing and marked symptoms of septicemia. On exploration I found the posterior laryngo-tracheal surface in a state of coagulation necrosis. A day or two later the patient showed evidences of a fistula between the esophagus and the trachea in the midst of this necrotic tissue, so that he was put on rectal feeding. It was soon found that he could not subsist long on this method of feeding, so I advised a gastrotomy, which was performed under local anesthesia by Dr. Carl Beck. The patient stood this ordeal very well, but could not retain much of the food poured into his stomach; he would vomit or return it through the created gastric fistula. About one week later, while his neck wound was being dressed, there came away a large slough, which left a perfectly smooth cavity or outline of the thyroid cartilages with the opening of the esophagus, but no evidence of any carcinoma. Tissues taken at different times from the neck region for microscopic examination showed at no time evidences of carcinoma. It now became possible to insert a stomach tube into this esophageal opening and so feed the patient, allowing the gastric fistula to close. The patient, however, was so markedly weak-

ened that it did no good and he succumbed to the general asthenia.

This case demonstrates that the coagulation method destroyed all the carcinoma, but at the sacrifice of life. It reminds me of a story which is so apropos that I hope to be pardoned when I insert it in this paper.

"A man who had a cancer of the face was asked by a Patent Medicine company for a testimonial because it was known that he was cured by their product. He acquiesced and said: 'After taking ten bottles of your medicine I wish to say that I am glad to state that the cancer of my face is gone—but I am sorry to say also that my face is gone, too.'" The loss of this man's larynx may be due to the fact that the principles of Percy's coagulation method were not carried out in the strictest sense, because I had to develop my own technic. I have reference to the cooling of the neighboring tissues, which, it will be seen, was employed in the subsequent cases with not such disastrous results.

*Case 2.* Mr. Hgl., 55 years of age; married; two healthy children; brewer by trade; uses his voice often in speech making, and in summer a great rooter at the baseball games. Lives in Montana in the copper smelters region.

For past six months noted a hoarseness which gradually increased to a marked degree. Consulted his specialist, who told him he had a growth in the larynx and removed a piece for microscopical examination. This proved positive for carcinoma. With this history he was referred to me. I found a growth as large as a hazel nut, irregular in outline, nearer the left posterior commissure than anteriorly. The physical and laboratory examination, other than the microscopic specimen of the piece removed, were negative. Operation decided upon. Under local anesthesia (morphin  $\frac{1}{4}$  gr. and novocain and cocaine) a laryngotomy was performed, the same way as in Case 1, except no preliminary tracheotomy was done, and the cricoid cartilage was not opened. The same procedure of removing the growth and cooking its base as in the previous case was done by Percy's method and no cooling device employed. It must be remembered that the growth was located nearer the esophagus than in Case 1, owing to what followed. The thyrotomy was dressed open by packing on top of an up and down tube. The patient made a very rapid recovery, but he could not swallow. After the customary forty-eight hours he had to be fed by rectum for more than a week. At the end of that time it was possible to pass a stomach tube and he was fed through that, but it still was impossible for him to swallow, although local conditions appeared very satisfactory. At the end of the third week he could not swallow water, but could rice and mush. At the end of five weeks

he could swallow anything. The tube was left out and wound permitted to heal.

The patient went back to Montana and I heard nothing from him until four months after, when he came in with a tracheotomy tube and a marked swelling on the right side of his neck. He stated that he had been feeling fine, constantly gained in weight, when one day he noted some pain in swallowing, then a sudden appearance of a swelling on the side of his neck, chill and fever and considerable difficulty in breathing. The doctor was called in and hurriedly took him to a hospital, where he performed a tracheotomy. This neck growth then disappeared somewhat slowly, but again reappeared. Then it again became much smaller, but now he cannot breath without the tube.

Examination shows that the man has not lost any in weight and within the larynx there did not appear to be a recurrence of carcinoma. There was, however, a sort of an edematous looking tissue about the right cord closing up the larynx. No motion to the arytenoids. The neck mass is not nodular, but smooth, hard and yet appeared to fluctuate somewhat. Slight temperature every afternoon.

My diagnosis was a possible pharyngo-esophageal diverticulum in consequence of the weakening of the wall due to the action of the Percy heater. I therefore cut down over the swelling and found a great deal of infiltration of the tissues of the neck. I removed some of this infiltrated mass and had it examined microscopically (it was found negative as to cancer). Coming down near the pharyngeal area, I opened into a cavity which was filled with a considerable amount of thick fluid containing white particles which were found microscopically to be necrotic tissue. A drainage tube was inserted and patient observed as to possible recurrence of carcinoma.

Conclusions in this case are:

- (1) That he is possibly cured of his carcinoma of the larynx.
- (2) That the location of the growth near the esophagus and the removal and subsequent cooking of this carcinomatous base without any cooling apparatus was probably responsible for the weakening of the esophageal wall with subsequent diverticulum formation.
- (3) That had the doctor incised the swelling and put in a drain he might have avoided a tracheotomy.

*Subsequent course.* Within a few days another piece of tissue removed from the neck mass, showed a rapidly growing carcinoma. There was very likely a glandular infection present at the time of the first operation, but it could not be determined, as the patient had a very short, fat neck. I now decided to try out the method of coagulation by the diathermic process, which I wish now to demonstrate. We inserted into the tumor the flat metal electrode and the sharp needle point electrode opposite this flat surface having about 1 cm. of tumor mass between



the two electrodes. Now the current was turned on and from 100 to 1,800 milliamperes of electricity sent through. One observed the sizzling of the tissues and that if the finger was put on, one would feel that the tissues were very warm. The measurement of the head by a thermometer registered about one minute after the treatment 120° Fahr.

Such applications are made in 3-5 places at the same seance. Of course the skin and tumor are injected with novocain because the treatment is painful. After six weeks of treatment once or twice a week we found considerable degree of reduction of the tumor, which is not exactly a necrosis, but a mummification of the mass and falling off with the dressings. There is comparatively little odor to the wound unless neglected to be dressed. It is interesting to note the resistance of nerve and blood vessels to this treatment. The facial nerve is almost exposed and the heat from the treatment must undoubtedly reach the nerve, yet the facial muscles are in perfect action. The carotid artery was exposed and, fearing the possible erosion and fatal hemorrhage, I decided to put a ligature about it, at the innominate, thus being able to tie it in the event of such an accident.

A few days later a sharp oozing occurred, so that I decided to ligate the carotid. This, however, did very little good, because the following day a much more severe hemorrhage occurred, from which he succumbed.

Post mortem examination of the wound showed that the hemorrhage came from the internal jugular, which I considered thrombosed a long time before this.

The further conclusions in this case are that the carcinoma is not destroyed by the diathermia as we applied it, and that neither nerves nor blood vessels are easily affected by the degree of heat obtained by this strong current. The progress of the disease and treatment is illustrated in Figures from 1 to 7.

*Case 3.* Mr. Frtch. Aged 51 years. Began to notice a hoarseness in June, 1916. After about three weeks consulted a laryngologist, who treated his throat by local applications. On one occasion following the treatment he had a choking spell that alarmed the family. He was also rapidly developing difficulty in breathing, particularly on inspiration. He changed laryngologists, and the condition was recognized as a growth and suspected carcinoma.

At this stage the patient was referred to me, exactly seven weeks from the time he started to complain of hoarseness. On examination I found a pale looking mass the size and shape of a good sized hazel nut, being attached at the right side at and below the vocal cord near the arytenoid region. It was smooth in character and appeared to be quite free and movable, like a polyp. General condition of the patient was excellent. Operation for relief and positive diagnosis decided upon. This was performed at once. Local application to the oral cavity, pharynx and larynx of pure cocaine. Suspension laryngoscopy.



Fig. 1

While doing this the patient gave a sudden marked inspiration and sucked in this pedunculated tumor into the cavity of the larynx, completely shutting off his air. By means of a long pair of dressing forceps the tumor was brought back outside of the larynx, so that the patient could breath again. By means of Killian alligator forceps the pedicle of this tumor was grasped and without very much effort the whole growth was removed. Very little bleeding followed. The base of this growth remaining in the larynx was now thoroughly curetted and the Percy cautery applied.



Fig. 2



Fig. 3

There was very little reaction following this procedure, and the patient considered himself cured. The microscopic examination of the tumor removed proved to be a small spindle celled sarcoma with very few blood vessels and blood lakes. It was decided to do a more radical operation should there be a recurrence. This occurred with such rapidity that within ten days the patient had difficulty in breathing. A laryngotomy by the aid of the Percy (cold iron) coagulation method was performed and the tumor removed. I employed the esophagus cooling tubes as well as the Leiter's coils externally, thus conforming nearer to the true technic of Percy. I closed the laryngeal wound primarily, but left in the tracheotomy tube for a few days. There was considerable toxic absorption from the wound, but the patient made an uneventful recovery and left for his home town three weeks after



Fig. 5

operation, with the tracheal opening closed. Two weeks later the patient began to show evidences of laryngeal obstruction, and the laryngologist in his home city advised him to return to me because he found a rapid recurrence of the growth.

The patient wished to defer doing this a few days, when one day he had a choking spell and the doctor had to do a hurried tracheotomy. As soon as he recovered from the shock, etc., of the last procedure he came back under my care. I found a smooth growth filling up the entire larynx and in the center a yellowish, firm, necrotic plug. I decided to reopen the larynx and found the entire ventricle filled out principally with this necrotic plug, which could not be dislodged. The microscopic examination of a piece of tissue removed, still showed the sarcoma. It was now decided to give him x-ray treatments by means of deep penetrating rays, right through the larynx fissure, which was being held open by a Jackson up and down tube. The patient was now beginning to show marked symptoms of toxic absorption, and it was thought best to



Fig. 4



Fig. 6





Fig. 7

discontinue the x-rays and try massive doses of radium. Therefore on March, 1917, the various shaped tubes and applications of radium were placed within and without the larynx and allowed to remain twelve hours at a time, for thirty-six hours. Altogether 200 mgms. of pure radium was used. The immediate result, that is within a day or two, was striking. The odor and what little pain there was became much less. On the sixth day we could all see a decided shrinking of the sarcomatous mass, but the existing necrotic plug from the Percy treatment did not appear to be influenced, except perhaps as to the toxic absorption from it being less.

*Subsequent course.* During the next three weeks the sarcomatous mass was seen to be shrinking, the neighboring skin of the neck much reddened and tender to superficial touch. Even the necrotic plug became loosened up, but whether that is due to the action of the radium or was about due to come off, is problematical. The fact remains that thus far, three weeks after the radium has been applied, he is in a better condition than he had been before the first operation. He is gaining in weight and is very hopeful of a cure.



Fig. 3



Fig. 9

It is, of course, my intention to make a subsequent report of this case at some future time.

The progress of the disease and treatments up to the present date are shown in Figures from 8 to 11.

*Still further report of course.* Since the presentation of this paper in February, 1917, the patient began to show evidences of marked toxic absorption, also rapid emaciation and evidences of increase in the necrotic mass. Soon after, he began to have great difficulty in swallowing, with marked infiltration of the esophageal-tracheal fistula, which led to a speedy end.

In spite of this fact, however, the progress of the case was much slower than I observed in similar



Fig. 10



Fig. 11

conditions, the patient dying from inanition. (Fig. 15 shows the conditions as found shortly before death.)

The final conclusions in this case are that neither the operation, the Percy cautery, nor the radium were able to stop the growth of sarcoma because the necrotic mass, following the application of the radium and the result of the original burning with the Percy cautery, appeared to be definitely outlined by a new growth of sarcomatous tissue. Another important point is that in the future when I make a diagnosis of this condition of sarcoma of the larynx I shall insist that a laryngectomy is the only procedure warranted in such cases.



Fig. 12

*Case 4. Mr. M.* This case has already been reported in the *Annals of Otology, Rhinology and Laryngology* (March, 1917) as a probably cured case of carcinoma of the larynx by means of suspension operation and deep penetrating x-ray treatments. I will, however, make an abstract of that report in this connection, since that will save time and be more complete.

Aged 54 years; always in good health; slight hoarse-



Fig. 13

ness of three years' standing. Consulted laryngologist, who found a small node anteriorly on left cord. Removed a particle, which was sectioned and diagnosed by competent pathologists as squamous celled carcinoma. This the patient brought to me with suggestion from his laryngologist to remove the larynx if it was the only thing to do, but try and save the voice if possible. The laryngoscopic examination verified the previously stated picture, and it was decided to do a thyrotomy, but to subject him to a preliminary deep x-ray treatment to possibly prevent implantation and sealing up of the lymphatics. The result from the x-ray (ten treatments) was remarkable in the reduction of the swelling and clearing of the voice. I now decided to change my plan and therefore suspended him and removed all the growth I could find. This proved to be carcinomatous microscopically. I had him x-rayed again for three erythema doses, twenty-six treatments in all, in the hope of completely eradicating the disease. He did beautifully in so far as the action and appearance of the larynx. There developed, however, a complication from the x-ray treatment that was somewhat alarming—namely, symptoms of myxedema. These promptly disappeared on the administration of thyroid gland. Patient went back to the coast apparently a cured man. After nearly a year he returned, saying that the doctor thinks there is a return and that his voice is not so clear. Examination verified these facts. I again suspended him, removed some small particles from the left anterior



vocal cord which showed microscopically not to be malignant. He received, nevertheless, another course of x-ray treatment and went back home apparently cured. Almost another year passed when he wrote saying that there was a return of the trouble, and I advised him to come back. Examination now revealed a considerable swelling at the seat of the old trouble, but it appeared to be smooth. I again suspended him and removed some of this swelling and subjected it to the microscope. Again reporting normal cells, principally inflammatory. I now treated him locally, with astringents, but instead of getting smaller it grew somewhat rapidly and looked cancerous. After a number of x-ray treatments were given and no improvement seen it was decided to operate more radically. Since the results from the thyrotomy with subsequent Percy coagulation treatment proved not to be successful in my hands, I proposed a laryngectomy, which the patient accepted reluctantly on account of the prospects of losing his voice. After promising and describing to the patient my idea of an artificial larynx and the good prognosis for relief if he was operated on before the cancer developed outside of

lobes of the thyroid gland, I packed strips of gauze all around\*so as to wall off the mediastinum. After very carefully dissecting the trachea from the anterior wall of the esophagus I severed it (the trachea) from the larynx and turned it down toward the sternal notch, allowing it to protrude somewhat. It was stitched to the skin on either side. The larynx was now dissected upwards away from the esophagus until the pharynx was reached. Then the thyro-hyoid membrane was severed and the larynx removed, closed with sufficiently healthy tissue to insure that none of the malignant growth was left behind. The defect in the pharynx was reduced to the minimum and the incision united except in the center just below the hyoid bone, which is to become the subsequent place for the insertion of the artificial larynx. Considerable catgut was employed in the obliteration of the cavity. This became infected and there resulted a great deal of sloughing. In order to keep the food from coming out through the pharyngeal opening it was necessary to feed the patient with a stomach tube. Gradually as this opening contracted the patient could swallow without difficulty. Outside of this trouble, an uneventful recovery resulted as shown in Fig. 12.

The gross specimen Fig. 13, when opened, showed that the carcinomatous process was confined entirely within the larynx, but markedly involved the base of the epiglottis. A microscopical examination of this growth from the depths shows positive carcinoma. The next step was to construct an artificial larynx. The development and evolution of it would be very interesting to narrate, but since the same is not yet perfected, I will defer the detail description for some future publication. Suffice to say that a fairly stiff rubber tube was found to be the best material. It is about  $2\frac{1}{2}$  inches long by  $\frac{1}{2}$  inch in diameter. The upper end opening has a sort of a nipple in order to confine it to the opening in the pharynx, while the lower tracheal end is smooth and can move up and down, according to the motion of the head and neck. It, however, fits fairly tight so as not to permit any escape of air, while speaking. By means of this simple device (Fig. 14) the patient can whisper very well and can be clearly understood. Since it is covered, by a patient wearing a handkerchief or hand about the neck, most people think that the patient has a cold. The method of producing tone is now being experimented with on this patient. I have applied a means of compressing this rubber tube from the outside, thus narrowing its caliber at



Fig. 14

the larynx, the patient consented. Under local anesthesia, apothesis one-half per cent solution and novocain one per cent solution, the following technic was employed:

A T-shaped incision was made, the horizontal incision passing above the hyoid bone and the vertical from the middle of the horizontal incision down to within an inch of the sternal notch. Severed the sterno-hyoid and sterno-thyroid muscles about their middle. Dissecting freely the trachea from the two

one place, making a sort of a chink, and he is able to produce a sound. A couple of elastic bands worked right into the rubber tube, as had been suggested to me by Dr. Iglauer, is also a possibility. Whenever the patient eats he is compelled to remove this speaking tube device, but I believe that that objection will also be overcome in time, in that the patient will be able to get the head in such a position that nothing will pass into the tube. He is able to do it now at times.

In conclusion I wish to say that this patient has all the right to expect a complete cure from cancer, but a subsequent report will be necessary. If when this patient succumbs from no matter what cause outside of cancer, he is not thoroughly examined post mortem, we will not know whether he was cured or not.

#### DISCUSSION (Abstract)

Dr. Thomas (of Perry) reported one sarcoma of the superior maxillary appearing in the roof of the mouth, in the region of the mandible, one at the alveolus of the superior maxillary, two sarcomas of the tonsil and one carcinoma of the larynx, all terminating fatally, also one case of rhinoscleroma which proceeded to a fatality.

Dr. Selig (of Chicago) reported a round cell carcinoma of the septum. The history was that it had been under the care of a man who had done repeated operation and had told the patient that she had polypus. During the summer previous to the time he saw her, she had been operated on several times, and no diagnosis had ever been made, but it was a carcinoma. Radical removal of the septum followed by prolonged use of the x-ray has resulted in the complete disappearance of all carcinoma up to the present time, which is about two years.

Dr. Beck (closing): I haven't anything to add in answer to the discussion, inasmuch as the gentlemen didn't disagree in anything particular except in reference to the terminology. All of you know we have malignant or galloping syphilis, so-called. The term malignant, as I have taken it, is a term that is accepted by the American Society for Control of Cancer. For instance, scleroma is not a carcinoma, and yet it has all the characteristics of a malignant disease, and I think must be so termed. The same is true of endothelioma endovascularis. Angioma progrediens fulminans, a rapidly growing birth-mark, is a malignant growth, for it destroys the life of the patient, as does tuberculosis. Consequently, when we speak of malignant diseases, we usually understand sarcoma and carcinoma.

#### PROTECTION OF MILITARY CAMPS AND CANTONMENTS.

The State Department of Public Health has made provisions for the protection of the military camps and cantonments in Illinois by thorough policing of the zones surrounding these temporary homes of the military forces. Each military camp and the zone surrounding it will be supervised by a sanitary unit made up of epidemiologists, bacteriologists, sanitary engineers, inspectors and quarantine officers, and especial attention will be given to water supply, sewage disposal, venereal disease, tuberculosis, food supplies and communicable diseases.

These units are now located in the vicinity of Camp Grant at Rockford; along the shores of Lake Michigan in the vicinity of Fort Sheridan and the Great Lakes Training Station; at the aviation camp at Rantoul and in the vicinity of Camp Lincoln and Camp Lowden at Springfield.

A sanitary survey, which is now in progress in and about Rockford, has already brought forth information indicating the urgent need of rigid precautionary measures.

---

#### STATE HEALTH ITEMS.

The equipment of the State Laboratory of Sanitary Engineering is now practically completed and is being rapidly installed. This will give the State Health Department its first complete equipment for all forms of sanitary investigation.

---

Among the new features of the public health exhibit at the Illinois State Fair were models and booths devoted to tuberculosis and an attractive section showing the means of publicity employed by the State Department of Public Health. In the latter exhibit, Alfred S. Harkness, whose health cartoons have received unusual attention throughout the nation, was busily engaged at his easel while a printer, at a Gordon press, was printing Harkness cartoons and State Department of Health epigrams for distribution as souvenirs. In the tuberculosis exhibit was a mechanical model depicting a battle scene with a continuous line of wounded men coming back from the front and a similar line of those incapacitated by tuberculosis which has developed under war conditions. Another booth was employed to show the models of sanatorium construction recommended by the Department to the seven counties now engaged in the establishment of county tuberculosis sanatoria. The Better Babies Contest, which has proven a great drawing card at the State Fair for several years past, was better and larger than ever. In one booth, young women were securing recruits for the Illinois Public Health Reserve Corps, made up of men and women who are willing to do their war "bit" at home in the conservation of the public health.



# ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society, under the direction of the Publication Committee of the Council.

## GENERAL OFFICERS, 1917-18

PRESIDENT.....E. B. COOLLEY, Danville  
PRESIDENT-ELECT.....E. W. FIEGENBAUM, Edwardsville  
FIRST VICE-PRESIDENT.....E. P. SLOAN, Bloomington  
SECOND VICE-PRESIDENT.....SADIE BAY ADAIR, Chicago  
TREASURER.....A. J. MARKLEY, Belvidere  
SECRETARY.....W. H. GILMORE, Mt. Vernon  
(Ex-officio Clerk of the Council)

## THE COUNCIL

District 1—EMIL WINDMUELLER, Woodstock.  
District 2—EDWIN S. GILLESPIE, Wenona.  
District 3—CLYDE D. PENCE, Chicago.  
District 4—AUGUST H. ARP, Moline.  
District 5—C. S. NELSON, Springfield.  
District 6—C. D. CENTER, Quincy.  
District 7—C. F. BURKHARDT, Effingham.  
District 8—C. E. PRICE, Robinson.  
District 9—FRANK C. SIBLEY, Carmi.  
CLYDE D. PENCE, Chairman, 3338 Ogden Avenue.

Send original articles and all communications relating to advertisements and mailing list to Dr. Clyde D. Pence, Editor, 3338 Ogden Avenue.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items to Dr. Henry G. Obis, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

## MEDICO-LEGAL COMMITTEE

ANDY HALL.....Mt. Vernon  
WILLIAM O. KROHN.....Chicago  
GEORGE STACY.....Jacksonville  
D. R. MACMARTIN.....Chicago  
C. B. KING, Chairman.....3938 Jackson Blvd., Chicago  
THOMAS D. CANTRELL, Secretary.....Bloomington

## GENERAL COUNSEL

ROBERT J. FOLONIE.....39 S. La Salle Street, Chicago

State society will pay no bills for legal services except those contracted by the committee. Notify the Chairman at once. Don't employ attorneys.

SEPTEMBER, 1917

## Editorials

### DRAFTING DOCTORS.

Somewhat recently a number of editorials were published in various newspapers and other publications, including a few medical journals, on the above subject. The burden of all these was that the army needed physicians, the doctors were not enlisting, and the draft for physicians would become necessary and would follow.

The press was not to blame perhaps for such indulgence, as the cry came first from high sources. Such statements, we think, are unwarranted and ill-advised. The doctor is not easily scared, is rather hard to drive, and furthermore, the statements were not quite correct.

If an army of 3,000,000 men is raised, it is estimated that 21,000 doctors will be needed in the Reserve Corps. On July 25th, 5,000 doctors had accepted commissions in the Medical Reserve Corps, or practically one-fourth of the total num-

ber required for the contemplated army of 3,000,000. Another 6,000 doctors had on that date been recommended for commissions. These figures are from the government's reports. The great majority of these will accept commissions without doubt. On August 8th, 910 physicians of Illinois had been recommended for commissions, and many of them had been accepted. Others were still pending. According to the Journal of the American Medical Association, on August 4th approximately 16,000 physicians had made applications for commissions in the Medical Reserve Corps. Of this number nearly 14,000 had been recommended for commissions. These estimates do not include the physicians who are with the National guard. These figures show that the doctors are volunteering much faster than the army is being selected.

We do not take kindly to the terms "drafting" and "conscripting." They sound rather harsh to us. In another issue we stated that in our opinion the Illinois physicians would come to the aid of the army when needed. We still believe they will, and up to this time they have fulfilled the prediction. We have no reason to think that the profession of Illinois, or any other state, will fail in its duty.

The military demand on the medical profession will be a heavy burden. Should there be a shortage in the medical corps, the government, and not the profession, should bear the stigma. All of the states permit many of the irregular cults to, in some way, practice medicine, until the business of the regular physician is in competition with these spurious practitioners. The government is not accepting these irregular practitioners for army medical service, but expects the regular profession to carry the entire load. In other words, the irregular may practice on civilians, but not on army men. At this time we have not heard of a single osteopath or chiropractor being in any way connected with the army service.

Aside from this there are other reasons that one might suspect would make the physician slow in offering his services. The great majority of physicians, who are doing general family practice, realize that if kept away from their offices for one or two years, their business is gone, and they will, on their return, be compelled to start and build an entirely new clientele. A man hav-

ing financial responsibilities may well be pardoned for waiting until he is actually wanted before volunteering his services to the army.

Other men, who know their business well, who do not take kindly to military drill and discipline, and care not for the splendor of a military uniform or of camp life, do not see the necessity of months of time spent in learning what appears to them a useless performance prior to the actual service of warfare. This to them appears as time wasted. They will gladly go when called to actual warfare, and perhaps a doctor may care for a wounded soldier as well without this military training.

There are many other reasons why physicians might be slow in accepting commissions in the Reserve Corps, not the least of which is the failure of our army to give just recognition to its medical department, as well as the unjust method of ranking the Medical Reserve Corps' volunteers.

A short time ago a member of the English parliament wanted an order passed disbaring American physicians from the English medical service, because, in his opinion, men, ranking as our American doctors are ranked, could not be efficient. A confrère understood the situation in the United States, and American doctors are still helping the English to care for their wounded. Our Allies recognize their medical departments, and rank the doctors accordingly.

All of these and other reasons, if necessary, could be used as excuses for the doctors being slow in volunteering, but up to this time, apologies are not necessary. When there is actual need of doctors for actual army service, there will be no shortage. The profession is seldom slow in recognizing its duty, and never slow in performing it.

---

#### ANOTHER IMPOSITION

Last year the Health Commissioner of Chicago directed that all school children be examined by physicians for contagious diseases before entering school, and condemned the doctor who would not do this examining and certificate writing free of charge. The profession did the work, but let the Commissioner know what it thought of such procedures, and presumed the offense would not be repeated.

Recently the profession of Chicago has been circularized by the Commissioner, directing an

extensive examination of school children, and telling the doctors they could go to the engineers of school buildings and get blank examination certificates for their reports. To examine a child and get the history and data asked for on this blank will, if done in any sort of manner, require twenty minutes' time, and, if done thoroughly, so that the certificate is of any value, will require at least thirty or forty minutes. The circular letter closed by saying, "The question of remuneration for your services is a matter between you and your patient. We feel sure that people who are unable to pay for this service will be cared for free of charge," and was signed by the Health Commissioner and the Superintendent of Schools.

The whole thing, of course, is a repetition of last year's imposition, couched in slightly different language, requiring in addition a general examination of the child for disease or defect it may ever have had, plus the filling out of a long certificate. The Commissioner is well aware that many families cannot afford to pay for their examinations, and presumes too much on professional good nature, by asking in a thinly veiled manner for free service.

Verily, it is time for Chicago to change its method of selecting its Health Commissioner.

---

#### MEMBERS OF THE SOCIETY IN THE ARMY SERVICE.

We have endeavored to secure a list of the members of the Society, or of the doctors in Illinois, who are now in active army service. We had hoped to have this for publication, and could then add to such a list the names of doctors entering the service later. We still are in hopes of securing the names of doctors serving the government, but at this date we have not been able to procure them. The list, of course, if corrected, would change every day, as new men are volunteering their services. The clerical force at the disposal of the army is just as busy, no doubt, as is the training officer or the newly recruited private, and has little time in which to make statistical data.

---

#### BEG YOUR PARDON!

In the discussion on the paper by Dr. Orr in the August JOURNAL, the reporter credited Dr. C. B. Brown, Sycamore, with attending three



thousand obstetrical cases without meeting either placenta previa or eclampsia. Dr. Brown modestly disclaims the number and suggests as more accurate: "Delivered two thousand women and had not done a Cesarean section for any case of placenta previa or eclampsia nor anything else—and all have lived."

#### WAR MEETING FOR HEALTH OFFICERS.

A war meeting will be held at Washington, D. C., October 17-20, 1917, by the American Public Health Association. This will replace the annual meeting which was to be held at New Orleans, La., Dec. 4-7, 1917.

The papers and conferences will deal largely with the health problems created by the great war—the food supply, communicable diseases among soldiers, war and venereal disease, war and the health of the civil population, etc.

President Wilson has said: "It is not an army we must shape and train for war; it is a nation." Go to the Washington meeting; then come back and do your bit!

Washington will be crowded and those interested are urged to reserve hotel accommodations at once. It will be easy to cancel reservations; but it may be impossible to obtain rooms at the last moment. Any hotel or railroad can give a list of Washington hotels.

Preliminary programs will be automatically mailed to all members of the A. P. H. A. about Sept. 15th. Non-members may receive them free by writing to:

#### THE AMERICAN PUBLIC HEALTH ASSOCIATION.

126 Massachusetts Ave., Boston, Mass.

#### SOME OBSERVATIONS DURING THE RECENT EXAMINATION OF CONSCRIPTED MEN FOR THE ARMY.

1. Most of the subjects had tachycardia—not natural, however. The occasion produced it.

2. All serotal conditions, viz: Hydrocele, varicocele, epididymitis, orchitis, etc., were invariably found on the left side.

3. Practically all colored candidates are flat footed, but have perfect teeth.

4. Very few subjects were rejected on account of their feet.

5. We found some who thought they were

totally disabled on account of "stomach trouble," "nervousness," etc.

6. We found a number who should wear glasses, but do not.

7. A number should be circumcized (not specially to qualify them for Army service).

8. Some had active perceptible gonorrhea.

9. We had to inconvenience some blind men, epileptics and paralytics by a re-examination.

10. We found some hard to examine because they were deaf or could not speak English.

11. Some who do not know the English letters were asked if they could see the small type line of letters at the bottom of the test card.

12. The first day's work seemed harder than the second and third days.

O. C. CHURCH, M. D.

#### ARMY ROENTGENOLOGISTS

##### SCHOOLS OF INSTRUCTION IN MILITARY ROENTGENOLOGY

At the direction of Surgeon General Gorgas a conference of Military Roentgenologists was held at Cornell Medical College, New York City, June 11-25, 1917. The Surgeon General ordered this conference with a view to standardizing x-ray apparatus and courses of study in roentgenology.

Major Arthur C. Christie from the Surgeon General's office and Major P. W. Huntington from the Army Medical School represented the army. The instructors, who will have charge of the various schools for Military Roentgenologists in different parts of the United States, were present together with members of the Committee on Preparedness of the American Roentgen Ray Society.

The following instructors have been ordered to active duty at stations noted: Major F. H. Baetjer, M. R. C., Baltimore School of Military Roentgenology; Captain E. S. Blaine, M. R. C., Chicago School of Military Roentgenology; Captain W. B. Bowman, M. R. C., Los Angeles School of Military Roentgenology; Major A. W. George, M. R. C., Boston School of Military Roentgenology; Major A. L. Gray, M. R. C., Richmond School of Military Roentgenology; Majors L. G. Cole, M. R. C. and L. T. LeWald, M. R. C., New York School of Military Roentgenology; Major W. F. Manges, M. R. C., Philadelphia School of Military Roentgenology; Captain E. H. Skinner, M. R. C., Kansas City School of Military Roentgenology, and Dr. G. C. Johnston, Pittsburgh School of Military Roentgenology.

The following information regarding the plans formulated at this meeting is given for the benefit of these interested:

The government is going to give special training in this work to selected officers in the Medical Reserve Corps. They will be instructed in military x-ray work at the several schools. Officers who are ordered to

take this course will be detailed upon pay according to rank for the period of instruction. The length will be about three months but officers who have had unusual experience in x-ray work or those who become proficient before the end of the course will be certified to the Surgeon General as soon as they have become qualified. Those who show lack of adaptation or application will be relieved of this detail and assigned to other duties or discharged by order of the Surgeon General.

Those desiring to take this work will proceed as follows: Write a letter to the nearest school immediately indicating your preference for this x-ray course; make application for a commission in the Medical Reserve Corps, U. S. Army, through the nearest recruiting medical officer; write a letter to the Surgeon General, Major Christie, asking to be placed upon this x-ray instruction detail at the nearest school and attach this letter to the papers which are sent in at the time you take your examination for the commission; write a letter to the nearest school when you have received your commission and have accepted it stating your readiness for orders to active duty.

The government is going to the expense of training these selected officers as military roentgenologists and will, therefore, be desirous of using them in this capacity in the field, base hospital or other detail, to the greatest possible extent.

## Correspondence

### PHYSICIANS LEASES.

August 18, 1917.

*To the Editor:* The Chicago Rotary Club has learned that a great number of physicians who have enlisted for service during the present war are embarrassed by unexpired leases. In certain cases, such corporations from whom they rent have refused to cancel leases. It seems to the Chicago Rotary Club that when physicians are so much needed in the United States army every effort should be made to relieve them of contracts rightfully binding in times of peace, but which might better be waived in times of national peril.

We all know that the physician giving up an established practice to enlist makes perhaps the biggest sacrifice of us all, because his business depends absolutely on personal contact. The day he leaves his business ceases. But his lease goes on. Yet our country is calling for more physicians, and many patriotic doctors everywhere are trying to arrange their affairs to go.

It is possible to create a strong public opinion favoring the canceling of leases in such cases. If advisable, the matter can be carried for consideration to Congress. But first, the Physicians' Lease Committee wants figures and facts. We are sending this letter to 20,000 physicians scattered all over the United States. May we ask you personally to help us by promptly filling out and mailing back to us the enclosed postal card? Kindly do it today.

Your prompt cooperation will place in the hands of your committee the necessary data for an effective presentation of the facts before proper legislative bodies.

We want to help. We believe, in fairness to all, a great work can be done. We know that you will be glad to mail the card today. When we receive it, you will have our earnest thanks for your cooperation.

Yours very sincerely,

CHICAGO ROTARY CLUB,

R. R. Denny, Chairman.

c/o Denny's Food Sales Co., Chicago, Ill.

### WHAT THE GOVERNMENT ASKS OF THE PRESS.

The desires of the government, with respect to the concealment from the enemy of military policies, plans, and movements, are set forth in the following specific requests. They go to the press of the United States directly from the secretary of war and the secretary of the navy, and represent the thought and advice of their technical advisers.

For the protection of our military and naval forces and of merchant shipping, it is requested that secrecy be observed in all matters of:

1. Information in regard to the train or boat movement of troops. Such information is at all times and under all circumstances dangerous and should be scrupulously avoided.
2. Information tending directly or indirectly to disclose the number or identity of troops in the expeditionary forces abroad.
3. Information tending to disclose the names of line officers in expeditionary forces and reference to individual units of these forces. Only names of staff officers are permissible.
4. Information calculated to disclose location of the permanent base or bases abroad.
5. Information that would disclose the location of American units or the eventual or actual position of the American forces at the front.
6. Information of the movement of military forces toward seaports or of the assembling of military forces at seaports from which inference might be drawn of any intention to embark them for service abroad; and information of the assembling of transports or convoys; and information of the embarkation itself.
7. Information of the arrival at any European port of American war vessels, transports, or any portion of an expeditionary force, combatant or noncombatant, until announcement is authorized by the secretary of war or the secretary of navy.
8. Information of the time of departure of merchant ships from American or European ports, or information of the ports from which they sailed.
9. Information indicating the port of arrival of incoming ships from European ports or after their arrival indicating, or hinting at, the port at which the ship arrived.
10. Information as to convoys and as to sighting of friendly or enemy ships, whether naval or merchant.



11. Information of the locality, number, or identity of warships belonging to our own navy or to the navies of any country at war with Germany. Papers published in ports should with especial care refrain from giving information to enemy agents in regard to ships stationed or calling at such ports. Because dangerous news is known locally, it does not follow that it can be safely published. Nonpublication of dangerous news obliges the enemy to rely on spies actually in the localities concerned, thus adding difficulties and delay in its transmission.

12. Information of the identities of American merchant ships defending themselves against submarines, and the identities of their captains, their gun crews, and crews. No matter from which side of the ocean the news, it is asked that this information be withheld from publication. Editors will appreciate the importance of cooperation to withhold from the enemy such information as might expose the officers and men of merchant ships to the danger of cruel and outrageous reprisal.

13. Information of the coast defenses of the United States. Any information of their very existence, as well as the number, nature, or position of their guns, is dangerous.

14. Information of the laying of mines or mine fields or of any harbor defenses.

15. Information of the aircraft and appurtenances used at government aviation schools for experimental tests under military authority.

16. Information of all government experiments in war material.

17. Information of secret notices issued to mariners or other confidential instructions issued by the navy or the Department of Commerce relating to lights, lightships, buoys, or other guides to navigation.

18. Information as to the number, size, character, or location of ships of the navy or of the merchant marine, ordered laid down at any port or shipyard, or in actual process of construction; or information that they are launched or in commission.

19. Information relating to dry docks and to all classes of work, repairs, alterations, or construction performed in connection therewith.

20. Information of the train or boat schedules of traveling official missions in transit through the United States.

21. Information of the transportation of munitions, or of war material.

Photographs.—Photographs conveying the information specified above should not be published.

These requests go to the press without larger authority than the necessities of the war-making branches. Their enforcement is a matter for the press itself. To the overwhelming proportion of newspapers who have given unselfish, patriotic adherence to the voluntary agreement, the government extends its gratitude and high appreciation.

THE COMMITTEE ON PUBLIC INFORMATION.

By GEORGE CREEL, Chairman.

July 30, 1917.

## Public Health

### NEW STATE RULES FOR THE CONTROL OF PULMONARY TUBERCULOSIS.

While pulmonary tuberculosis has been a reportable disease in thirty-eight states and territories for a number of years past, the disease has been more or less ignored by public health officials in Illinois. During 1915, under the general rules for the control of communicable diseases, tuberculosis became reportable, but, with only a few exceptions, municipal health authorities failed to enforce this provision.

The awakening of the civilized world to the fact that tuberculosis stands second only to the wounds of battle as a medical war problem, and the difficulties encountered by the exemption boards on account of the fact that even open cases of tuberculosis were not a matter of public record, prompted the State Department of Public Health to promulgate rules for the control of the disease which are effective in Illinois beginning August 1, 1917. These rules, when submitted to physicians, internists, phthisiotherapists, health officers and military authorities, have received the highest commendation and are declared to be perhaps the most reasonable and at the same time the most effective in the nation.

The rules require that every physician, attendant, parent, householder or other person having knowledge of a known or suspected case of pulmonary tuberculosis must immediately report the case to the local health authorities and they further require that the physician shall notify the patient and his family as to the nature of the ailment and shall give specific instructions to prevent infection of other members of the patient's household and to protect the general public. The health officer, upon receiving notice of the case, shall visit the premises, or cause the premises to be visited, to satisfy himself that reasonable preventive measures shall be observed.

The restricting clauses of the rules apply particularly to open cases of tuberculosis, but it is held that every case shall be regarded as an open case until three specimens of sputum taken within a period of three weeks and examined in a public laboratory shall be found to be negative. Attention is drawn to the fact that sputum examinations are made by the State Department of Public Health in its diagnostic laboratories without cost either to the patient or the physician.

The rules forbid a patient suffering from open pulmonary tuberculosis occupying a sleeping room with any other person and specific directions are given as to the disposal of sputum and the control of room infection through coughing.

Under the rules, food cannot be sold or given away from premises in which there is housed an open consumptive, although the local health officer is permitted to modify this rule after personal inspection of the premises and after satisfying himself that all precautionary measures are being observed.

The rules also forbid any consumptive engaging

in the handling or sale of food products and exclude from schools all teachers, pupils or school employes suffering from tuberculosis while tuberculous nurses are forbidden to attend sick persons or young children.

The responsibility is placed upon property holders and agents of notifying the local health authorities of the death or removal of tuberculous tenants or householders and such owners and agents are forbidden to rent the property to others until disinfected by the local authorities.

Failure to comply with any of the provisions of these rules and regulations subjects the health officer, physician, nurse, householder or patient to a fine of not more than \$200 for each offense or imprisonment in the county jail for not more than six months or both, at the discretion of the court.

### PROGRESS IN MEDICAL LICENSURE IN ILLINOIS.

*Health News*, the official bulletin of the State Department of Public Health, in its issue for August, reviews the progress made during the past four or five years in medical examination and licensure in Illinois. This article summarizes the work of the State Board of Health in the examining and licensing of physicians, other practitioners and midwives, through the enactment of the Medical Practice Act of 1917, and until the function of licensure was turned over to the newly created Department of Registration and Education under the provisions of the civil administrative code.

It will be recalled that, through a decision of the Supreme Court, the State Board of Health was declared to have no authority to revoke licenses issued prior to 1899 after the passage of the Medical Practice Act of that year. This weak and embarrassing position was remedied by a law enacted during the legislative session of 1915 at the instance of the Board.

During the past few years the examination of "other practitioners," or those authorized to treat human ailments without the use of drugs or operative surgery, has been so changed that these candidates answer the same questions given to physicians, except in the subjects of materia medica, therapeutics, operative surgery, obstetrics and practice.

The review calls attention to the fact that, while in past years candidates for licensure as midwives were accompanied at examinations by interpreters, who, in many instances, were also the candidates' instructors in midwifery, this objectionable practice was done away with several years ago; the translation of the questions being assigned to a recognized bureau of interpretation and the questions being translated by the department of foreign languages of the University of Illinois.

The Medical Practice Act of 1917, recognized as the best Act ever operative in Illinois for the regulation of the practice of medicine, is largely the result of the experience and observations of the State Board of Health during the past few years, and many of

the features of examination and licensure made statutory under that law were already being employed at the time of its enactment.

The practical examination of medical students applying for licensure in those subjects requiring definite demonstration, was adopted by the State Board of Health some time ago; but, on account of the passage of the civil administrative code transferring the functions of examination to another department, and the expenditure in time and money in instituting practical examinations, definite action in this feature of examination was deferred.

The summary cites various progressive features of the new Medical Practice Act, which have already been pointed out in these pages.

### DIVISIONAL ORGANIZATION OF THE STATE DEPARTMENT OF HEALTH.

The State Department of Public Health, under the direction of Dr. C. St. Clair Drake, which takes the place of the State Board of Health which has been charged with the supervision of public health in Illinois since 1877, has completed its organization dividing its activities under several important subdivisions each with its individual chief.

Dr. Drake, who is director of the department, and virtually "health commissioner" of Illinois, served for many years with the Chicago Health Department before being made secretary of the State Board of Health by Governor Dunne something over four years ago.

The assistant director is Dr. George Thomas Palmer, who became affiliated with the department on account of the paramount importance of the tuberculosis war problem of the present war, and who is also chairman of the Tuberculosis Committee of the State Council of Defense and who has been president of the Illinois Tuberculosis Association for the past five years.

Amos Sawyer, chief clerk of the Executive Division, has served for many years as chief clerk of the State Board of Health and held the position of acting secretary of the board for a number of months after the death of the late Dr. James A. Egan and before the appointment of Dr. Drake.

The Division of Communicable Diseases is headed by Dr. John J. McShane, who rendered notable service as health officer of Kenosha, Wis., and at Akron, Ohio.

Dr. Clarence W. East, who has been connected with the State Board of Health for several years in the capacity of District Health Officer, is serving as acting chief of the Division of Tuberculosis.

The diagnostic laboratories of the Department, which constitute a separate division affiliated with the Division of Communicable Diseases, is in charge of Dr. George F. Sorgatz, for some time State Bacteriologist, as Acting Chief.

The Division of Sanitary Engineering, which is undergoing extensive development and expansion, is under the supervision of Paul Hansen, who has been



connected with the State Board of Health since the initiation of a department of sanitary engineering by that organization, and who was formerly connected with the State Water Survey and the University of Illinois. Mr. Hansen is now in the service of the United States Army as a sanitary engineer and, in his absence, the Division is under the temporary supervision of Maurice Sjoblom, Assistant Engineer of the Division.

Paul L. Skoog, Acting Supervisor of the Division of Surveys and Rural Hygiene, served as Assistant Superintendent of Health of the City of Springfield and has been actively identified with the original sanitary survey of Springfield, the Russell Sage Survey of Springfield and the survey of Cumberland County, conducted by the United States Public Health Service and the State Board of Health. Mr. Skoog has also served with the State Food Commission and as Dairy Inspector for the State Board of Health.

The Division of Vital Statistics is temporarily under the direction of Orrin Dilley, who has been connected with the registration of vital statistics in Illinois for the better part of twenty years.

The Division of Child Hygiene and Public Health Nursing, which represents an entirely new activity in Illinois, is being rapidly developed. Mrs. Esther Werner, R. N., formerly of the Chicago Visiting Nurse Association, and recently connected with the Chicago Health Department, is serving as temporary supervising nurse.

This office staff, working in conjunction with the district health officers, whose work was created a few years ago, gives to Illinois a specialized health service such as the State has never known before.

---

The Sanitary Survey of the City of Freeport, carried out by the State Department of Public Health in conjunction with local health authorities and public-spirited citizens, has been completed and the final reports are in process of preparation in the offices of the department.

---

While there has been a larger number of cases of anterior poliomyelitis reported in Illinois during the past six months than during a similar period in 1916, the State Department of Public Health contends that the actual prevalence of the disease has been less and that the apparent increase is due to earlier and better methods of diagnosis.

---

## Society Proceedings

### COOK COUNTY

#### CHICAGO OPHTHALMOLOGICAL SOCIETY

A regular meeting was held February 21, 1917, with the President, Dr. Paul Guilford, in the chair.

#### EXHIBITION OF A CASE OF ANIRIDIA

Dr. Emory Hill reported the case of a girl, aged nine years, whose vision had always been poor;

the eyes had always oscillated and the pupils were very large. There seemed to be practically complete absence of the iris; the ciliary processes were not visible; the cornea, lens and vitreous were clear, the fundus appeared normal; there was myopia and astigmatism. Family history negative; no history of similar ocular defects obtainable. The nystagmoid movements resembled the searching movements of an almost blind eye more than nystagmus. At times, a vertical, and also at times a horizontal, motion is more noticeable than the others. She had glasses three years ago correcting 2.5 D. myopia and  $3\frac{1}{4}$  astigmatism which now give 20/100 vision. Reduction showed a little more than  $2\frac{1}{2}$ —in each eye and —4 cylinders in each eye with 21/70. The absence of the cornea or lenticular opacities seemed to be somewhat unusual and the absence of any evidence of heredity was very unusual. It is supposed that absence of the iris is the particular eye defect which most often shows a history of some ocular defect in past generations. The theory generally accepted is that it is a defect of development and not the result of intrauterine inflammation.

Dr. Hill thought that perhaps the theory suggested by Hess and supported by George Coates that there is a stricture advancing around the lids which means a new growth and the iris eventually protrudes these two, allowing the entrance of the iris between the lens and cornea, was a good one. All of the theories suppose that there is something which interferes with the pushing in of the lens.

#### DISCUSSION

Dr. William A. Mann reported a similar case in which the best vision he could obtain was, for the right eye, —9 gave 20/200 and the left —5.5— gave 10/200. The patient was a drug clerk who was using —6 and said he could not read well with his glasses. In his case the lens had a number of striations and the fundus was indistinct. He gave him bifocals and with the addition of + 3.50 for close work he could get a Jaeger 6. There was no heredity in his case.

Dr. Charles P. Small said that in his case, aside from the aniridia, which he considered congenital, both cornea were sclerotic. The patient was thirty years old; she had gone to school and could see perfectly until she was about fourteen. The first symptom was a cataract which developed in the right eye. This was needless, and the white spot appeared on the cornea shortly afterward, and increased until it covered the lower part of the cornea. In the left eye she has striae which are visible around the periphery of the lens. She could not expect much increase in vision because of the sclerosed condition of the cornea, although from 4/200 it had increased up to 11/200. There was marked lateral nystagmus. Family history in this case was negative.

Dr. Hill, in closing, said that one point which was worthy of mention was the frequent inflammatory reaction after any attempt to operation upon these cases. So far as he knew there were very few reports on the anatomical findings in these eyes. Generally there were the rudiments of the ciliary processes; there was some stump of the iris which had been adherent, and there had been reported a considerable overdevelopment of the pectinate ligament, the condition remaining in the adult eye as it was in the fetal eye.

## SPECIFIC AND TUBERCULAR KERATITIS; COMPLETE DETACHMENT OF THE RETINA

Dr. Edward F. Garraghan said that the first case was a little girl 12 years of age. The vision of both eyes was very good until April, 1916. The right eye was reddened but not painful; vision 5/200. The cornea showed no ulceration but presented deep infiltration with a whitish mass. The iris reacted under atropin and was kept dilated. The teeth were slightly irregular. The Wassermann test gave a \* \* \* \* positive reaction. The patient had been placed on potassium iodid up to 30 drops, 3 times a day, and given mercurial rubs, and the infiltration had gradually cleared up until at present vision was 20/40 with no sign of infiltration at all.

The tubercular keratitis case was a patient aged 27 years, of good family, married 9 years, one child, a girl aged 8 years who is delicate and has enlarged glands. The patient had had 4 operations in 18 months, 3 times on an old goiter. There was a slight swelling over the right eyelid. One month after the goiter operation last May the right eyeball became inflamed. The conjunctiva became injected and the cornea became involved. The sight gradually diminished and there was pain nearly all the time. Examination showed that the sclera was very much injected and painful to touch. There was deep corneal infiltration. The iris reacted sluggishly to atropin. The Wassermann test was negative, the von Pirquet positive. There was severe exacerbation of all the eye symptoms. Tuberculin was given by injection,  $\frac{1}{2}$  mg. which after 8 to 10 days was increased to 1 mg. and after another 10 days to  $1\frac{1}{2}$  mg. The eye had gradually improved under the treatment.

Family history: Mother died two years ago, cause unknown; father died 10 years ago, had had considerable bronchial trouble. One brother died of tuberculosis. The patient's child has tuberculous glands. The diagnosis was made on the subjective findings. The patient was on iodide for a while but this made things worse. On the tuberculin she had improved right along. She can now see trees and when first seen saw only shadows.

### DISCUSSION

Dr. George F. Suker asked whether the cornea in the little girl with inherited syphilis presented any small islands of apparent infiltrates from which linear striations seem to arise and pass into the corneal stroma, or if corneal striations were the principal feature.

It had been his observation that such cases as presented the first named condition made a far better recovery as to visual acuity and yielded more readily to efficient treatment than those cases which came under the second group.

There is no doubt but that there are two types of syphilitic keratitis—one in which the spirochete can be found in the meshes of the cornea, and in such cases the keratitis is a direct expression of the activity of the spirochete; in the second type, the keratitis is the apparent result of the syphilitic toxin itself, the spirochete not being present in the cornea, but may be occasionally found in the circum-corneal circumference.

In the first type the corneal involvement is not as deep as

in the second or striated type. In the former, the antisyphilitic treatment is much more efficacious than in the second type, in which latter the general constitutional condition needs very much greater attention.

It seems as if the one type is a local expression in the cornea of the spirochete in an inherited syphilis, while in the other it is an apparent local condition resulting from the toxin of a generalized inherited syphilis in which the spirochetes are "fast"—much on the order of a "sympathetic theory," as it were.

As to the second case, tuberculous keratitis, he wanted to warn against the promiscuous use of the diagnostic tuberculin test, for in many in whom it was used in which a focal reaction followed, the eye went from bad to worse. Neither ought the ophthalmologist himself make the test without the collaboration of a competent internist. Small therapeutic doses at longer intervals are more effective and safer than rapidly increasing doses at comparatively short intervals. No dose, either therapeutic or diagnostic, ought ever to cause a focal ocular reaction, as more often than not greater harm is done than is gained by establishing the true diagnosis. A thorough physical and clinical examination, including x-ray chest pictures and the like, will often avoid the use of a confirmatory diagnostic injection.

For the therapeutic injections, begin with the smallest dose and be extremely cautious about increasing same; always be guided by the physical and clinical condition of the patient resulting from the injection whether to increase or decrease the therapeutic dose. In such cases, not only the local treatment is of value, but the general constitutional treatment of tuberculosis as such is of as much if not greater value.

Dr. Suker called attention to an admirable article on the subject by Dr. Hiram Woods, presented at the Memphis meeting (1917) of the American Academy of Ophthalmology and Otolaryngology which fully expresses his own views on the matter in concrete form and advised the members to avail themselves of this article.

Dr. Oscar Dodd said he had had a number of cases of tuberculosis of the cornea and felt like emphasizing the point made by Dr. Suker regarding too large doses or increasing them too rapidly. Even with the greatest care he had frequently seen focal reaction, and the condition made very much worse, it sometimes taking 2 or 3 weeks to quiet the eye so that further treatment could be given. His method of treatment was to keep the dosage of the tuberculin down to a point where it did not cause any marked focal reaction, and in these cases he had seen beneficial results. He thought oculists did not pay sufficient attention to the handling of these cases in a general way. If the patient was not under good hygienic conditions no amount of treatment would be of avail. Good results may be obtained where the patient has good care with plenty of good food and fresh air and the other things generally used in tubercular cases. In cases where the hygienic conditions could not be controlled the condition was bound to grow worse in spite of anything that could be done. Dr. Dodd differed with Dr. Suker as to the time between injections. He thought they should not be repeated too frequently but believed a small dose given once every week or 10 days, if the case was watched carefully, was all right.

Dr. Garraghan, in closing, said that the case of retinal detachment was interesting because of the great extent of the separation, having the appearance of a plaited funnel. There were no premonitory symptoms and almost complete sudden blindness. From the standpoint of treatment little could be expected as the case was of two months standing when first seen. The case was that of a young man, age 22. Patient was seen for the first time on January 3, 1917. Two months previous to this date he became aware of blindness in right eye in a rather peculiar way. Having a sensation of foreign body—left eye—he closed the lid and for the first time became aware of blindness in right eye. No history of injury; no pain in eye; transillumination shows absence of tumor; no tension; only light perception. There is complete detachment of retina.



## THE INTERRELATION BETWEEN EYE, EAR, NOSE AND THROAT

Dr. Joseph Beck said he might have entitled the presentation better by calling it the discussion of exophthalmos and recession or protrusion of the eyeball, for that was what the cases represented. He presented the cases from the standpoint of the conditions about the head and neck, and particularly emphasized the factors which had presented themselves in these cases in relation to the production of exophthalmos and anophthalmos, and especially in reference to the treatment which could be said to bear relation to the laryngologist.

Case 1. Recession of the eyeball. This patient had been referred to Dr. Beck on account of severe pain on the side of the head and inability to breathe through the right nostril; and a marked recession of the right eye. The conditions at that time were not seen by Dr. Loeb, and Dr. Beck did not make the measurements by the instruments most of the men were familiar with, but by another. A marked difference was very apparent in the two eyes. There was also a paresis of the hypoglossus, and intense pain and paralysis of the right recurrent laryngeal nerve and a loss of sensation in the superior laryngeal nerve. There was slight atrophy of the shoulder muscle, although the movement was all right. There was a hard, irregular tumor the size of a hen's egg on the side of the neck, growing quite rapidly, which developed after the patient came to him, and also a tumor back of the nose. He removed a piece of the tumor back of the nose which appeared to be a sarcoma. On the drum there was a linear port wine reddish mark which looked as if there had been a hemorrhage inside the drum. In the course of time there was rupture of the drum. The ears were treated, with the result that the tumor practically disappeared. There was now one on the other side which looked like glands. The eyeball had gradually come forward, the recurrent laryngeal nerve had begun to act so there was some action in the vocal cord, and there was some sensation.

The proposition was what was the cause of the recession of the eyeball? They had assumed that the cause was an irritation of the sympathetic, a destruction of the sympathetic and exophthalmos.

Case 2. This case was one of marked exophthalmos in a young lady of whom Dr. Beck showed photographs taken at different ages when she had no exophthalmos. The exophthalmos developed gradually with the growth of the tumor. The proposition was the disappearance of all her symptoms of exophthalmic goiter after the operation that is now in vogue, the removal of tonsils in connection with exophthalmic goiter. The young lady had not been under his care for this operation but she had two very beautiful scars, one for the purpose of ligating the thyroid vessels and the lower incision was made for the removal of the goiter. Subsequently to that her tonsils were re-

moved. The patient came to him on account of nasal trouble. Operation was done on the thyroid, and after it the nose became completely blocked. The condition was a myxedematous structure, and there were other symptoms of myxedema. This patient had the usual effect on the pulse rate, the body weight, etc., and the nasal obstruction was very troublesome; this was probably a permanent condition. He had never seen a case where the desired results were obtained and still the eye remained the same.

Case 3. This woman, so far as the history shows, never had a tumor. She came with marked symptoms of exophthalmos, the goiter, the toxic symptoms, and complained about the eyes. When she first came the protrusion had been much more marked than at present. There never was a tumor and is none at present. Following ligation there was marked improvement in the general condition. It is known that ligations never cure a case and the thing now was to do something permanent. Dr. Beck believed that the tonsil was a factor in the condition and he had removed the tonsils under local anesthesia without any bad effects whatever. There was not as much bleeding as in a normal individual, and the removal was followed by good results and a gain in weight. In due time toxic symptoms developed after the ligation, the improvement being of only short duration. The removal of the tonsils, however, was done in Rochester after the thyroidectomy. Dr. Beck had asked Dr. Crile about this last summer and he believed in the importance of the tonsils in connection with the thyroids and removed the tonsils after the thyroids.

### DISCUSSION

Dr. Clarence Loeb had not seen the first case until the eye was in the process of returning to its former condition. At the time he saw it there was a definite recession of the right eye which had since returned to a complete level with the other eye, as measured by the exophthalmometer. The young lady had a most pronounced exophthalmos, so much so that it was impossible to measure it with the instrument as the cornea extended beyond the last line. He had not seen this patient until the condition was well established.

He saw the other case shortly before she was operated on for the tonsils. Neither patient presented all the typical signs of exophthalmos. In both cases there was free movement of the eyelids and there was a protrusion of the eyeball. The staring appearance of the eyes was very noticeable.

As to the irritation and paralysis of the sympathetic, he had always been taught that the exophthalmos was due to a paralysis of the sympathetic and the exophthalmos due to the irritation. At first, he was inclined to scout the new theory, but it must be remembered that although the other symptoms very frequently improve rapidly after a removal of the gland, the exophthalmos often remains. So it may be that there was a paralysis. If irritation of the sympathetic caused the exophthalmos, removal of this irritation should, theoretically, be followed by recession of the eyeball.

So far as the treatment of the exophthalmos was concerned this varied from performing Kronlein's operation to resecting the cervical sympathetic.

Dr. George F. Suker asked the members to examine these patients to help him verify a symptom he had investigated at the Cook County Hospital in a number of exophthalmic goiter cases and that was, a deficient complementary fixation in lateral rotation of the eyes.

One patient was made to look to the extreme right, with

head straight forward, and to fix a point for a second or two which was held three or four feet from the patient, and then the fixation point was rapidly swung into the median plane while the eyes were to follow it. During this rotation it was observed that the left eye properly followed the fixation point, while the right eye lagged behind and suddenly jumped into fixation with the left eye when the object reached the median plane, thus causing an apparent divergency for a moment.

Dr. Frank Brawley supported Dr. Beck's statement that the tonsillar infections played a great role in the thyroid disease. He thought those men who were seeing a good many tonsil cases very frequently saw cases where the acute thyroid irritation subsided rapidly following the removal of the tonsils, and this was particularly true where it had been determined by careful plate cultures that the streptococcus was present in the hemolytic or viridans form.

Dr. Clarence Loeb, in closing, stated that the fundus was normal in both cases. He thought the fact that winking was present prevented any irritation of the cornea as a result of the protrusion. He would certainly look for the Suker sign in all cases of exophthalmic goiter which he saw hereafter.

Dr. Harry S. Gradle asked how Dr. Beck accounted for the exophthalmos.

Dr. George F. Suker asked how Dr. Beck accounted for the fact that the pupils were always small in exophthalmic goiter.

Dr. Beck, in replying, said he believed there were certain fibers which were destroyed and others not. We knew that in the vestibular nerves there were two distinct paths for the superior canals and for the horizontal and vertical canals, and yet it was the same nerve. They also acted differently to stimulation and to the different degrees of stimulation. He thought it was possible that these fibers which had to do with the mechanism of the iris were not destroyed, whereas those which control the vessels which are behind the eyeball could be irritated or destroyed. Immediately after death the exophthalmos disappeared, and that may mean that other fibers stimulate the vaso-constrictors and each nerve in the sympathetic has those two components.

He thought that perhaps Dr. Suker was right, that when one cut both nerves the protrusion would go back but he had never seen it demonstrated.

## THE VISUAL REQUIREMENTS OF MILITARY AVIATORS

Dr. Charles P. Small said that the advent of the aeroplane in modern military equipment had made it necessary to modify to some extent the method of physical examination of applicants. It is of the utmost importance for the aviators to possess normal functions presiding over the maintenance of bodily equilibrium under a definite set of conditions. It was of equal importance to know the ocular conditions present, not only the visual acuity but the entire ocular apparatus.

Huss (Marine-Oberstazartzt) in his recommendation for the eye examinations of flyers includes the history, objective examinations, refraction, acuteness of vision, visual field taken roughly by the hand, and pupillary reaction. Unless the sub-headings "Objective Examinations" were more comprehensive than would generally be included under that term, there were a number of very important omissions in this list for the routine examination.

Visual acuity of 20/20 in each eye is, of course, of prime necessity. In the British Army the standard for general service requires, without correction, vision of 6/24 in the better eye and 6/60 in the worst eye, which must be the left. In Germany combatants are required to have correctness in

vision of at least 6/12 in one eye, while in the other the correct vision may be minimal, and in the Landstrom the second eye may even be blind. In the armies of Germany, Austria, France and Italy more than six D. of myopia are allowed, but because of the constant demand upon the eyes, from the time the aviator begins his ascent until he has made a landing, a visual acuity of less than 20/20 vision in each eye might be a serious handicap. Even with normal vision in his eye, the aviator must have a normal binocular vision, as otherwise his estimation of distances, of the relative location of places and objects would be valueless, and his own safety as well as that of his machine would be in serious jeopardy when attempting to make a landing. There should also be normal muscle balance as well as good abductive and adductive power.

The presence of nystagmus should disqualify an applicant. A cycloplegic should be used in all cases, not only for determining absolute refraction, but in order to see the peripheral parts of the fundus and detect any evidences of previously existing iritis or uveitis.

One of the most important features of eye examination seems to have been altogether ignored, namely, the examination of the color sense.

The speaker thought that there should be a re-examination of the eyes at least once a year, as sensitiveness of the retina, the endurance of the eye muscle, etc., could be determined only after practical trial.

The successful applicant for army aviation service should have: 1. 20/20 uncorrected vision in each eye. 2. Binocular vision. 3. Absence of nystagmus. 4. Normal muscle balance and competent ocular muscles. 5. Normal media and fundi. 6. Normal visual fields, by perimetric examination. 7. Normal color sense.

### DISCUSSION

Dr. Wesley Hamilton Peck said there was one feature in the paper of Dr. Small which he had thought of for some time, and that was in reference to supplementing the aviator's vision by the use of photography. He thought if by the use of the latest improved cameras with rapid exposure shutters, rapid lenses and the fastest plates or films, various pictures were taken from airplanes or dirigibles, such as stereoscopic exposures which when viewed through a stereoscope would give the correct perspective, and others through telescopic lenses to give the largest possible detail of parts of the enemies camp, or moving picture exposures which could easily be projected, and 3¼ by 4¼ cameras with anastigmatic lens and regular negatives made from which could be made stereopticon lantern slides, and exhibited to the staff of army officers at headquarters at any magnification desired, much valuable aid might be rendered, as the aeroplanes have demonstrated that they are of the utmost value and indispensable in modern warfare in doing scout duty and directing the fire of artillery. The aviator is naturally fully occupied attending to his duties and many details necessarily escapes his eyes which the camera would collect and preserve for future careful study.

Dr. Clarence Loeb spoke of the requirements in the United States Service. He had been connected with the mobilization in Missouri and the standard for the line was 2—/40 or better in the right eye and 2—/50 in the left. No attempt was made to examine the fundus or test the refraction or the color sense.

Dr. Harry Gradle said that Dr. Stanton had shown him the requirements and he thought they included a high degree of



visual acuity. Dr. Gradle considered the requirements were now too low and should be raised.

Dr. Small, in closing, said in answer to Dr. Gradle's question that at present the requirements were 20/20 in each eye. He thought our service should be maintained at a very high standard. There was no provision made for the examination of the color sense. The muscles should show not only normal balance but should have good adductive and abductive power. The labyrinth was tested simply to see if there was normal reaction. Rejections were made if there was not normal reaction.

MAJOR H. WORTHINGTON,  
Secretary-Treasurer.

#### CHICAGO OPHTHALMOLOGICAL SOCIETY.

A regular meeting was held, March 19, 1917, at the Hotel LaSalle, with the president, Dr. Paul Guilford, in the chair.

#### Dr. A. M. Carr read a paper entitled TWO CASES OF SO-CALLED ACUTE INFLAMMATORY GLAUCOMA RELIEVED BY ESERINE.

*Case 1.* A man, aged 39 years, was first seen February 8, 1917. He complained of severe pain in the left eye; there was no blurring of vision, no colored rings about lights. In the evening the left pupil was larger than the right and the pain more severe, but he slept until about four a. m. The pain then became very severe and he saw colored rings about the lights for the first time.

*Examination:* Left ear, general ciliary injection, cornea slightly hazy, no corneal precipitates; anterior chambers both alike; iris slightly darker than right; pupil 6 mm. round and fixed to light; disc not cupped; left tension distinctly higher to fingers, the Schootz reading was  $47\frac{1}{2}$  mm., right  $14\frac{1}{4}$  mm.; vision 1.0 plus 2 right 0.8.

Eserine salicylates one-half per cent. solution was instilled into both eyes; the tension was definitely lowered, pupils narrowed to 1 mm.

*General examination:* Teeth dirty, pharynx slightly congested, tonsils versicolor on chest, moderate general enlargement of the lymph nodes, some hypertrophy of the left ventricle with a faint diastolic murmur at apex only; left lobe of prostate firm, some tenderness. Blood pressure systolic 126, diastolic 66. Urine negative.

Focal infection study showed positive tuberculin reaction, giving temperature of  $101.4^{\circ}$  F. with 4 mg. of old tuberculin at the 32nd hour; fluoroscopic examination of the chest negative for tuberculosis; cloudy right antrum, no pus; no pus in tonsils; strongly positive Wassermann.

*Diagnosis:* Acute inflammatory glaucoma in the presence of active lues.

*Treatment:* Miotic treatment to left eye continued for six days. The tension did not rise above 14 mm. after the second day. Eserine was then stopped to learn what would happen if the pupil was allowed to return to normal size. In the meanwhile a subcutaneous tuberculin test had been undertaken. After 48 hours, at the height of his reaction (temp.  $101.4^{\circ}$  F.) the left tension rose to 42 mm. with a pupil of but 2 mm. One-half hour thereafter both pupils were found to be widely dilated (8 mm.). One hour later

despite the pushing of eserine, the left pupil remained 8 mm., right contracted to 3 mm. There was distinct arterial pulsation of left disc. During the succeeding five days no eserine was used and tension remained below 14 mm. The tuberculin test was then repeated, but no increase in tension and no dilatation of either pupil occurred.

The visual fields were of special interest on this case, particularly those of the right eye. They showed the form found in primary optic nerve atrophy rather than the nasal limitation found in glaucoma.

*Case 2.* A man, aged 33, was seen on November 1, 1916, at 8 p. m., complaining of severe pain in his right eye, nausea and vomiting.

*Previous history:* Struck in the right eye with fist 5 months before. October 27, 1916, he came to the hospital for refraction. *Diagnosis:* Probably rupture of the choroid. Atropin was prescribed for the fellow eye for refraction. Gonorrhea eleven years ago; hard chancre three years ago, continuous treatment since. Heavy drinker until three years ago, smokes excessively.

*Examination:* November 1, 1916. Right eye, complete ciliary injection, some chemosis, cornea slightly hazy, pupil virtually oval  $5 \times 6$  mm. sluggish in reaction; iris slightly greenish-yellow; anterior chamber very shallow; tension distinctly elevated to the fingers, and Schiotz  $52\frac{1}{4}$  mm. Left tension  $14\frac{1}{4}$  mm., pupil  $6\frac{1}{2}$  mm. Patient stated positively that he did not put atropin in his right eye. Eserine salicylate one-half per cent. solution was instilled into the right eye. The pain was relieved and vomiting stopped.

*General examination:* Left inferior turbinate enlarged; deviation of the nasal septum to left; mucous polyp in right nares; general enlargement of lymph nodes; blood pressure systolic 160 mm., diastolic 110 mm.; urine negative.

Under eserine the next morning the right pupil was  $1\frac{1}{2}$  mm., tension  $8\frac{1}{2}$  mm.; cornea almost clear; almost an anterior chamber; plus ciliary injection and chemosis; right vision 12/200.

The next day tension of the right eye was  $7\frac{1}{4}$  mm. Holocain dilated the pupil to 6 mm., but gave absolutely no rise in tension and contracted again readily after eserine.

#### DISCUSSION.

DR. E. V. L. BROWN said that in view of the temporal limitation of both visual fields in the first case and the positive blood and spinal fluid tests he would consider it to be one of early primary atrophy of the type found in tabes and the acute inflammatory glaucoma to be an independent phenomena.

In the second case he thought it quite possible the patient got some of the atropin into the eye which became glaucomatous.

DR. WILLIAM H. WILDER asked Dr. Brown what his conception was of the way in which atropin might produce attacks of glaucoma and whether he had any idea that it might produce it in any other than a mechanical way which would be explained by the Weber-Knies theory. He said that as he remembered the record there was a large pupil when this attack occurred and the relation that that bore to the production of the glaucoma was interesting. He also asked what was the relation of the physiological cup to the rest of the optic disc—was it entirely on the nasal side?

DR. E. V. L. BROWN said that when the second attack occurred in the first case during the use of tuberculin no atropin had been used for two days; there was a temperature and when

the tension was taken it was 42 and some hours afterward the pupil had enlarged to 6 mm. The tension had been down to 7 or 8 and he thought it was the tuberculin that caused the change. He said the Knies-Weher theory appealed to him very strongly and he thought the glaucoma might be produced by instillation into the eye and secondarily by the systemic effect by dilating the pupil, in which case he thought there was a mechanical effect. The second time they did not get the glaucoma; the tension was kept down for five days and then 3 mg. of tuberculin was used. There was a temperature of 103 degrees F. but no dilatation of the pupil, the tension remained down and the eye had shown no further tendency toward a glaucomatous condition. They then dilated the pupil with atropin and got no tension. He said that in many cases of primary glaucoma there was a fever right along, and in many cases where one eye was involved and the other eye not involved the visual fields were taken and there was limitation of the temporal field. He thought the other case should be studied with regard to the primary optic atrophy of tabes. He said they had watched the case carefully and the cup was not on the nasal side. In one case they had atropin in the other eye and got an infection, and he had seen cases in which the cups were small.

DR. HARRY GRADLE was reminded of the case of a middle aged woman with a large family who came in for refraction in 1899. She returned in 1903 with a glaucoma simplex with a shallow excavation which extended almost to the edge of the disc. In 1907 his father did an iridectomy on each eye, which kept the tension down; the vision gradually decreased and the disc became paler. In 1911 she complained of various vague pains in the limbs and Dr. Grinker reported a well developed tabes, which explained the lowering of the vision with the atrophy of the disc without any tension. The pupillary reaction was out of the question. Since that time her vision has remained about stationary. She had the temporal limitation of the fields, which started early, before the iridectomy was performed.

DR. ROBERT VON DER HEYDT said he had recently seen a patient with a third nerve paresis in whom the dilated pupil brought on mechanically an acute attack of glaucoma. He thought the origin of the acute attack of glaucoma was interesting, as it was the result of dilatation of the pupil in a syphilitic constitutionally predisposed to glaucoma.

DR. CHARLES F. BURKHARDT, of Effingham, Ill., was much interested in the report of these two cases because he had been treating a similar patient at long intervals for the past five years. The patient, aged 58 years, has acute attacks of glaucoma in the left eye which last, as a rule, about 6 or 7 days, and he has been able to get fairly good results and get the condition cleared up by the use of  $\frac{1}{2}$  of 1 per cent. of eserine. He said he had on several occasions suggested that perhaps a iridectomy would be the best thing, but the patient would not submit to it.

DR. GEORGE F. SUKER thought it was interesting to find that the man was syphilitic and the mere fact that he had a limitation in the temporal field was significant of the fact that he had what might be called the highest type of tabes and therefore the glaucoma which he had was one just as Dr. Brown had attempted to explain. He thought it could be demonstrated that the patient was entirely well of the glaucoma, but if the case was watched further it would be seen that the retraction of the visual field would extend to the nasal side and then there would be a uniform concentric contraction which was typical of tabes or a perineuritis. He thought he would not ascribe the glaucoma symptoms as a whole to syphilis or its toxin and advised heroic antisyphilitic treatment, particularly large doses of salvarsan followed by mercury, but no potassium iodid. Syphilis *per se* has not up to the present time been considered as an etiologic factor for glaucoma. One would not want to deny the possibility, but the probability is certainly an extremely doubtful one even in the face of the hizarre activities of syphilis.

## TWO CASES OF SYMPATHETIC OPHTHALMIA WITH ANATOMIC FINDINGS.

Dr. E. V. L. Brown reported these cases as follows:

*Case 1.* Sympathetic Ophthalmia with Whitening

of the Lashes: S. Davis, aged 16. The left eye suffered a penetrating steel wound in April, 1916, and was operated for traumatic cataract 7 weeks later. Sympathetic inflammation developed in the fellow eye in the eleventh week and enucleation was performed in the sixteenth week. Examination in the seventh month showed a sympathetic iridocyclitis with precipitates, thickened and vascularized iris and dense pupil membrane, with secondary glaucoma. A large number of the lashes of all four lids became dead white early in the disease. The tension gradually declined. The tonsils were removed and Hg. rubs and benzosalin used for 5 months with effect. Sections of the primary eye showed the typical findings.

*Case 2.* Sympathetic Iridocyclitis and Choroiditis with Preservation of Useful Vision in the Sympathizing Eye.—T. Irving, aged 32. The left eye had a recurrent leucic iridocyclitis with secondary glaucoma, for which a trephining was done in November, 1912. About 30 months later vision became blurred in the fellow eye and in the thirty-fourth month both eyes showed the type of uveitis most frequently found in sympathetic disease, viz.: thickened tumified irides with precipitates. There was a rich net of new formed vessels on the primary iris. The enucleated primary eye showed the typical changes. Mercury and benzosalin were also used in this case and a tuberculin course given. Marked improvement did not occur, however, until infected tonsils were removed, when vision cleared to 4/10 and has remained this acute for 14 months. Innumerable round and slightly irregular discrete and confluent yellowish flecks are now to be seen in the equatorial and anterior choroidea, especially below. None of them are definitely white, indicating that the choroidea is nowhere atrophic through all its layers. Only moderate pigmentation is present.

Dr. Charles C. Darling read a paper entitled REPORT OF TWO CLINICAL CASES OF SYMPATHETIC OPHTHALMIA.

*Case 1.* J. J., first seen November, 1916. He had been hit seven years previously with an iron bolt which ruptured the right eyeball; the eye became quiet after four months, but would become red and painful at times. Two months previously the left eye began to fail and two weeks previously sight, he could not see to read.

Examination: Right eyeball atrophic; slight ciliary injection, no light perception. Left eye, photophobia, lacrimation, slight ciliary injection; numerous very fine deposits on Decemets membrane. Aqueous cloudy, iris greenish in color; pupil sluggish, dilated fully on the use of atropin; some pigment spots on anterior capsule.

Treatment: The blind stump was at once removed and treatment begun with atropin, dionin, inunctions of mercury, sodium salicylates, sweats and hot applications to eye. The sight steadily improved so by the end of December it was 20/50. Vision now 20/20 with a plus 200 Cyl. Sections of the enucleated eye show a degenerated eyeball with bone formation; nothing typical of sympathetic; possibility such a change



may be shown on examination of other parts of globe.

*Case 2.* J. K., seen October 26, 1916. There was a history of inflammation in the right eye for the past two months; no history of injury.

Examination: Photophobia and lacrimation. R. E. slight ciliary injection; cornea clear; iris greenish; pupil small, no reaction to light. R. V. 20/200. L. E., marked ciliary injection; cornea cloudy; a black spot showing where there had been a perforation of cornea with adherent iris root. Lens dislocated forward. L. V., light perception faintly; no projection. X-ray examination, no foreign body. Tonsils showed pus in both. Wasserman, tubercular test, 10 mm. N. R. all negative; no leukocytosis.

Treatment: Left eye was removed. Right pupil dilated, 2 per cent. atropin and cocain. Inunctions of mercury, sodium salicylate, atropin, removal of tonsils, after which sight improved, reached 20/70 falling again to 20/200 five days later.

New vessels seen in iris December 11. Vision gradually fell, fingers January 6 at one-half foot. The eye that was removed shows typical picture of sympathetic in all parts of the choroid.

Two points of interest in this case are the sympathetic inflammation as the result of a small perforating ulcer of the cornea and the absence of a keratitis punctata in the sympathizing eye until late in the course of the disease.

#### DISCUSSION OF PAPERS OF DRS. BROWN AND DARLING.

DR. GEORGE A. DARMAR cited a case which occurred last year in his practice. He said that in May, 1916, a man struck himself in the face with the end of a wrench, breaking his spectacles. A fragment of glass cut him in the right cornea, the incision extending from about the center to the edge of the cornea. The wound healed without complications, but four months to the day after the injury he noticed sympathetic irritation in the other eye. This increased and two days later Dr. Harry Gradle saw the case in consultation and advised immediate enucleation of the eye, which was done. Four days later the patient became nervous and irritable; he was naturally a very quiet man, but the nervousness increased for forty-eight hours, when he became violently insane and, although he was a man of exemplary habits and clean speech for thirty-six hours, there was a constant stream of profanity and obscenity. At the end of this time he slept for about six hours and awoke in an exhausted state with very little recollection of what occurred. He said he had looked up the literature and found that he was an almost typical case of postoperative psychosis, which Krafft Ebbing had described, but which more frequently occurs in women following childbirth, although they are frequently seen following operations on the eye or genitalia. He stated that the patient was now practically well with vision 20/20 plus in the remaining eye.

DR. WILLIAM H. WILDER said one point which struck him as Dr. Brown was describing his case of increased tension in the course of the sympathetic ophthalmia was the question of operation, and he was interested to know that he had shown his great sagacity in refraining from operation even though it seemed to be indicated. He thought that was a point which was well worth considering in connection with any case of sympathetic ophthalmia in any stage, for the reason that the inexperienced ophthalmologist who had not seen a number of these cases through long periods of time might easily be tempted too early to resort to operative interference. If there was any one thing in connection with the treatment of these important cases which should be emphasized it was to absolutely refrain from operative interference even months and months after the subsidence of the last symptom. He thought

the most that might be done would be paracentesis, which might be accomplished with safety, but if there was anything brought home to him in the treatment of this disease it was that one should not jump in "where angels fear to tread." He was convinced that no operation should be attempted so far as restoration of the vision was concerned if poor vision had resulted two or three years after the subsidence of all symptoms.

Dr. Wilder considered Dr. Darling's case interesting in showing how a comparatively simple injury might be instrumental in bringing on this disease, but he thought that such cases following perforating ulcer of the cornea were rare.

DR. E. V. L. BROWN, in closing, said he was glad to learn that Dr. Wilder too was opposed to operation on sympathizing eyes. He cited two further cases in which operations for tension had caused only an aggravation of conditions.

DR. CHARLES G. DARLING, in closing, stated that the precipitates on Decemet's membrane first occurred thirteen days after the patient entered the hospital. He had always thought that finding the precipitates on the posterior wall of the cornea was one of the first signs of the beginning of sympathetic ophthalmia, but in this case the precipitates did not appear until the eye had been inflamed for over a month.

#### PRELIMINARY REPORT ON SEVERAL CASES OF LATERAL VENTRICLE INJECTIONS OF MERCURY FOR THE OPTIC ATROPHY IN TABES AND GENERAL PARESIS.

Dr. George F. Suker thought it was necessary to reconstruct the generally accepted conception of so-called primary tabetic optic atrophy in so far as the process of atrophy is not an ascending one, originating in the retina and then proceeding into the nerve, but that it virtually is a typical secondary optic atrophy, starting as a neuritic process somewhere in the nerve and then descending to the disc. He stated that up to the present time every form of treatment of the atrophic process had been an utter failure; that experimentally on the lower animals it had been conclusively proven that intraspinal injections never reach the optic nerve to be of any intrinsic merit in treating optic nerve lesions, but that the subarachnoid or intraventricular injection had been proven experimentally to reach the optic nerve, and had given up to date the most promising results, it having been shown by numerous cases that repeated injections could be made into the arachnoid spaces without entailing untoward after effects, provided the injections were made with good judgment. He said the number of cases treated up to the present time was not sufficiently large to warrant the dictum that it is the sine qua non method, but he considered it a method worthy of further trial in selected cases. He reported seven cases which he had treated by this method, and exhibited photographs showing the method of procedure. Each of the cases had had a series of five to six injections, ranging from 1/100 to 1/20 grain of bichloride; the interval between injections varied from ten to fourteen days, and two had been at intervals of one month. All cases were treated, in addition, with mercurial rubs and iodides. From 5 to 40 c.c. of ventricular fluid were abstracted and one-half the amount, with the addition of the bichloride, was slowly reinjected into the ventricle. The first injection was made under general anesthesia and the subsequent ones under local. They were always made on the right side of the brain into the right lateral ventricle, so as to damage as little as possible any of the functioning brain centers. He

emphasized the fact that care should be exercised not to pass the needle through any of the dural vessels. He said if the ventricle was not reached upon the first insertion of the needle, the same with obturator in, has been raised and lowered, each time withdrawing the fluid with syringe, but to wait several days or a week before attempting the insertion again, in this way avoiding undue traumatization of the brain tissue and thwarting cortical and subcortical irritation. He stated that blood-stained serum must not be reinjected with the mercury, as it was certain to invite trouble, but that so far all annoying symptoms which had appeared subsequent to the injection have never remained permanent nor continued longer than three weeks. Caution must be observed when the serum is reinjected to have the inserted needle filled with fluid, so that it drips, in order not to force air into any of the ventricles.

MAJOR H. WORTHINGTON, M. D.,  
Secretary-Treasurer.

#### THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Tuesday evening, March 20, 1917, at 7:30, in the rooms of the Graduate School of Medicine.

The president, Dr. Stanton A. Friedberg, in the chair.

##### *Presentation of Cases*

Dr. Elmer L. Kenyon presented a young man who had possessed a falsetto voice, but whose voice was now normal.

The patient had been presented two or three months previously and was shown again to demonstrate the great improvement in the condition.

Dr. Kenyon also presented a young man who had been a stammerer since he was a young child, his father having also been a stammerer. He was twenty-six years old and had previously made six efforts to be cured. He came to Chicago on December 14 and went home February 1 under complete control. Dr. Kenyon said he was not "cured"—no stammerer was ever cured in three months—but he had control over his speech, which, if kept up long enough, would ultimately result in cure.

Dr. Kenyon said that stammering schools which advertise so extensively practically all "guarantee" a cure in six weeks, but in the very nature of the disorder was absolutely impossible in so brief a time, unless it happened that the stammerer was just on the point of spontaneous recovery. However, it was often possible for the stammerer to gain a capability of control in a less period of time. The patient talked under perfect control, explaining that four months treatment under psycho-analysis had resulted in absolutely no benefit. He had stammered worse at the end than at the beginning of that treatment.

Dr. Joseph Beck presented a case of "carcinoma of

the larynx," and showed the specimen and microscopic section.

Dr. Beck thought one of the interesting points about it was that the patient was under treatment by x-ray for two years, and was apparently cured by that method of treatment. The specimen showed that it was quite a large growth and required a laryngectomy. The point he wished to make about the after-care was in reference to the voice as a question of an artificial larynx. He had left an opening in the subhyoid region which he thought would ultimately be lined with mucous membrane and would allow the upper part of the artificial larynx to be introduced behind the tongue and the other end into the trachea. He had introduced a rubber tube in that way and the patient could speak so that he could be understood across the room, and at the same time he could breathe through it freely. He intended to consult Dr. Kenyon about producing the artificial voice as soon as the patient reached the proper stage. Most cases who had an artificial larynx inserted into the trachea had found them unsatisfactory and had discarded them. Someone had devised an artificial larynx in which one end fitted into the trachea and along the side of the lower jaw and side of face into the nose and back into the nasopharynx, and in that way the patient got a voice. That apparatus was the best known at present.

Dr. Beck also presented a case of "sarcoma of the larynx," showing the results of radium in large doses.

The patient had had two tracheotomies. He had a rapidly growing tumor, for which he had a thyrotomy with the burning process of Percy's method, cleaning out the whole anterior portion of the larynx. There was a recurrence with great sloughing from the burn. This had been followed with large doses of radium. Dr. Beck thought the profession was very fortunate in having in Chicago an institution where they could have the use of such large doses of radium. The rapidity with which the sarcoma melted away under this treatment was marvelous.

Dr. Beck had expected to present another case of "sarcoma of the hard palate," but the patient did not come. He showed some stereoscopic photographs of the case. The points of interest were the rapid disappearance of a tumor the size of a lima bean and the occurrence of a severe burn of the tongue and palate. The amounts of radium used were 125 mgs. for twenty-four hours in eight-hour periods. In the laryngeal sarcoma the patient had 75 mgs. for thirty-six hours in twelve-hour intervals.

Dr. Elmer L. Kenyon thought Dr. Beck's scheme for producing the voice was very ingenious and likely to bring about excellent results. He thought it was true that patients with carcinoma who had had a laryngectomy and had used a laryngeal tube of the old type soon discontinued its use, but that a certain amount of them with patience and perseverance could develop a voice of low carrying power, and some of them occasionally were able to develop a comparatively large voice.



*Scientific Program*

Dr. George W. Boot read a paper entitled

**HEMORRHAGIC MASTOIDITIS**

The first case was that of a patient aged seventy-eight, who was operated on January 7 at the Evanston Hospital, under local anesthesia, using one per cent. novocain plus adrenalin chloride. This was done on account of the patient's age and kidney condition. All the mastoid cells were found filled with dark clots; the mastoid was large and very cellular; all the cells, including the antrum, were opened. Only traces of pus were found in the antrum; the sinus was not exposed. The wound was packed with iodoform gauze and partly closed with clips. The patient's condition at the close of the operation was excellent, and he sat up and called for something to eat and drink. There was very little bleeding during the operation. On January 8, the 10:00 a. m. temperature was 101.8° F., pulse 96, leukocyte count 26,500; at 10:00 p. m., the temperature was 103° F., and there was a red and edematous area around the wound. On January 10 a well-marked facial erysipelas was present. Ten c.c. of Mulford's antistreptococcus serum was given and the erysipelas disappeared; the erythematous area was painted with tincture of iodine. The patient later developed cellulitis of the left leg, multiple abscesses, and on February 1 developed a second attack of facial erysipelas and died the morning of February 2.

Case two was a patient in the service of Dr. Joseph Beck in the Cook County Hospital. The patient was a man aged twenty-seven, whose illness began about the first of November. He was admitted to the hospital on December 16, complaining of pain below both knees, in the region of the right hip, and in the chest and shoulder. He claimed he had never been sick, but gave a history of gonorrhea seven or eight years ago, and a sore which a doctor called a soft chancre eight or nine months ago. At the time of admittance the scalp, ears and nose were negative; the pharynx was infected and the tonsils enlarged; the post cervical glands were enlarged, chest normal. There was tenderness to the right of the umbilicus, over the gallbladder and in the right lumbar region; also over the left ilium and behind the left hip joint. There was a slight nodular swelling over the heads of both tibias, where crepitus could be felt. Blood pressure systolic 118, diastolic 80. Wassermann reaction 4 plus positive. A diagnosis of luetic periostitis and pleuritis was made. On November 28 the left membrana tympani was red and bulging. Paracentesis revealed much pus. Shortly afterward the patient began to moan and seemed to lose consciousness, but an hour later was better and did not remember the attack. The following day there was foul discharge from the left ear and tenderness over mastoid. December 1 the patient was in constant pain and left mastoid tenderness was extreme, but no edema or bulging present; the ear was draining freely. A mastoid operation was done and the mastoid found to be large with numerous cells of moderate size which were all filled with

very dark red, almost black, blood clots. There was a small amount of pus in the antrum and some in the larger cells. Cultures from the mastoid pus gave a streptococcus. The patient made an uneventful recovery and was discharged from the hospital on January 3.

Dr. Boot said he had found only one case of hemorrhagic mastoiditis reported in the literature; a case reported by Loeb in 1915. The conditions in the three cases were much alike. The onset was severe, the discharge was a bloody serum and profuse; the mastoid tenderness was very marked, the temperature was moderate. There was a considerable leukocytosis and all gave the streptococcus in smears. The speaker thought a probable point in differential diagnosis was found in that the x-ray plates in Dr. Beck's case showed very little change from the normal, while transillumination in Dr. Boot's case gave a marked shadow. He believed if both transillumination and x-ray examination were done on the same patient it would probably be possible to make a diagnosis in advance of operation. He thought that ordinarily streptococcus infections require earlier operative interference than other types of infection, because of the greater amount of destruction done by the streptococcus; on the other hand, the liability of the soft part to develop erysipelas and cellulitis must be borne in mind, particularly in patients who have chronic nephritis.

**DISCUSSION**

DR. JOSEPH BECK said his case that Dr. Boot reported gave none of the classical symptoms or indications for a mastoid operation except the fact of the brain symptoms, which made him decide to operate even as late as he did. He thought Dr. H. W. Loeb had reported two cases instead of one and in the other case his bacteriological examination disclosed the diplococcus. He did not know that a bacteriological examination had been made and a definite result obtained in his case, but remembered that they had made cultures at the time of opening the mastoid. He thought the x-rays were of more value than the transillumination, as they were not obstructed by the blood clots. He said he had sectioned the bone in this case and the histologic examination showed that it was not an osteophlebitis septica of the mastoid, because the bone was not affected. The pathology was a great deal like the mastoid in which the cells are filled up with material which pulsates and bleeds very easily.

DR. J. HOLINGER said that with good reason hemorrhagic inflammations are considered severe. Hemorrhagic mastoiditis is not frequent, and he cited his observation of a patient with pronounced labyrinth symptoms in whom on operation he found the middle ear and antrum filled with tightly adherent blood clots. Sleeplessness, severe headache and lack of relief from large doses of morphine suggested the possibility of meningitis. The patient made a slow recovery.

DR. A. S. ROCHESTER said that within the last few hours he had operated on a case which presented some features which were of interest in connection with this paper. The patient had had a cold in the head four days previously, used a nasal douche, and within a few hours developed an acute pain in both ears. The drum membranes were bulging and a paracentesis was done on both sides; on the left there was a bloody, serous discharge; on the right a slightly bloody discharge, the blood soon clearing up. At operation the left mastoid bled profusely, the cells were broken down and filled with very bloody granulations and pus; on the right side there was very little bleeding, the cells were broken down and filled with yellowish pus, but very little blood.

DR. CHARLES H. LONG thought a number of such cases would

be found if they were looked for more carefully. In working in the laboratory he had found two or three cases, but knew nothing of the history.

DR. JOSEPH BECK, in answer to Dr. Long, said that Wingrave had shown post mortem changes in the sinus as well as in the mastoids, the same as Dr. Long had found.

DR. BOOT, closing, disagreed with Dr. Beck about what Dr. Loeb reported; he said Loeb distinctly called the organism a diplo-streptococcus. He thought there was a close relation between these cases and pneumonia, and the fact that the exudate in the cells was a fibrinous affair, not serous, and the fact that there was very little bleeding was interesting. He believed it was a distinct type of mastoid and not very common.

Dr. Arthur M. Corwin read a paper entitled

## HEMORRHAGE IN RHINO-LARYNGOLOGICAL WORK

Dr. Corwin said that, leaving out of account the uterus, perhaps the nose is responsible for more spontaneous loss of blood than any other region of the body, and bears its full share of accidental and operative hemorrhage as well. This brief paper does not aim to summarize all the data suggested by the title. It is not uncommon for physicians, even laryngologists, to apply the word bleeder or hemophiliac in a loose way, to describe the episode of vicious epistaxis, or severe, possibly fatal, post-operative hemorrhage, marked by prolonged bleeding time and delayed coagulation, but without adequate grounds for such a diagnosis. "Hemophiliac" applies to a distinct type. Purpura, whether simple or hemorrhagic, is merely a symptom complex resulting from toxemia of a wide variety with no single pathologic foundation. Rhinolaryngological hemorrhage purpuric in character is an incidence in scurvy, phosphorus or snake venom poisoning, the grave cachexias, leukemia and anemia and bacterial infections of many kinds. To differentiate these purpuric types of hemorrhage heredity is wanting, except in rare instances; in most cases they are individual bleeders, not hemophiliacs; they frequently show various grades of blood change, and there is fatty degeneration of the capillary walls. But the blood frequently clots in normal times. In any case, the diminished clotting is nothing like as marked as in hemophilia; the blood platelets are also apt to be diminished. The varices at the base of the tongue are rarely the site of hemorrhage, and yet their rupture may give extreme anxiety to both patient and physician unless identified.

Hemophilia proper is not common in America, and is said to occur twice as frequently in Germany as elsewhere. In fact, we as a profession have not learned much more about the hemorrhagic diathesis than we were taught as students. While we were taught that it was the female who always transmitted the tendency or potentiality, we have more recently learned that she hands it invariably to a male and is herself unaffected. No female is a hemophiliac. Though Virchow, and indeed earlier investigation, led us to believe that there was in hemophilia some peculiar change in the vessel wall, a greater thinness and fragility, evidence has disproved this—or, at least, none has confirmed it.

The real bleeder diagnosis, then, is summed up in:

1. Definite heredity, through unaffected females. (Law of Nasse.)
2. Prolonged bleeding time.
3. Coagulability markedly diminished.
4. Normal blood picture except leucopenia of anything. Blood platelets not diminished, as some have reported.
5. Origin in early youth.

We know physiologically that blood clotting is accelerated by raising the temperature and retarded by lowering the temperature, and yet we slap on ice bags following tonsillectomy—presumably for their reflex effect upon vasomotor constriction. But hot pledgets, not too hot, inserted directly into the wound will act as magically to check hemorrhage in the throat as in other surgical fields.

According to laboratory reports, blood clotting is stimulated by the administration of an anesthetic, a point perhaps in favor of the good old ether anesthetic vs. local anesthesia. On the other hand, addition of carbon dioxide and withdrawal of oxygen lessens the tendency to clotting. When the gas-oxygen anesthetic is administered by an expert, using an up-to-date device, there is no anesthetic to compare with it in tonsil surgery. The physiological laboratory demonstrates that blood received in an oil-lined receptacle under an oil film clots slowly. This principle applied in the use of short gauze strips boiled in vaseline at the time of operation gives support to tissue, a clean surgical dressing, with less irritation than dry gauze or sponges.

It is a familiar fact experimentally that calcium salts added to drawn blood stimulates coagulation, but this is not borne out clinically when administered internally. Applied to the wound upon pledgets soaked in one or two per cent., as advised by Keen of Philadelphia, chloride of calcium is of distinct benefit in checking and preventing hemorrhage. Adrenalin internally is reported to be inert by some as a raiser of blood pressure; it seems to be contraindicated except for the local effect, but in our appreciation of adrenalin we err too often in using it too concentrated. A 1:1000 solution produces a powerful contraction and quite as radical relaxation afterward, as action and reaction are apt to correspond. The strength of 1/4 or 1/10, the commercial solution, will give better results.

The most useful of all means by which we overcome pathological hemorrhage is the knowledge that blood serum or, under proper circumstances, whole blood, introduced into the circulation stimulates clotting as it does in drawn blood. We know that animal serum injected into a seemingly hopeless hemophiliac will usually save the patient. It will act as well in many cases of purpura and other little understood hemorrhagic types. Though rabbit, beef, horse and human serum produces like beneficial effect, heterologous serums are inferior to human serum in some essentials. Blood serum from one of the same family is prefer-



able because of the great danger of hemophilia if unrelated human serum or heterologous serum is used. Fresh normal human blood serum is obtained precisely as in making a Wassermann. Twenty to forty c.c. repeated in eight to twenty-four hours is safe dosage, unless anaphylactic symptoms contraindicate. Coagulate applied dry or in solution has proven exceedingly reliable in epistaxis, after adenoid removal, in tonsillar hemorrhage and in simple obstinate cases of bleeding after a tooth extraction. The speaker had had little experience with coagulin. He had not used the coagulation test invariably and had, fortunately, never lost a case from hemorrhage. He had used Parke-Davis ampules of pituitrin in a large number of tonsil cases with satisfaction.

He believed no laryngologist could allow a patient to die of hemorrhage without resorting to transfusion, if there is time, despite the dangers of infection, thrombosis, emboli and hemolysis.

#### DISCUSSION

DR. J. HOLINGER said there was a great difference between a bleeder and a hemophilic. Hemophilia is a well-characterized hereditary disease. Dr. Fonio, in Kocher's clinic, found that its pathology consisted of a scarcity of blood platelets, which is the cause of slow and incomplete coagulation of the blood in these people. He isolated the blood platelets and treated them in such a manner that they would not decompose and the Swiss firm of Ciba put the product on the market under the name of "Coagulen." Dr. Holinger had used this in powder form and in solution and found that it stopped parenchymatous hemorrhages and small spurs.

DR. GEORGE W. BOOT said that in cases of hemorrhage with a high blood pressure he thought it was a good plan to give the patient an injection of nitroglycerine to lower it. The test of the blood for coagulation was very simple; all that was necessary was a wire with several little loops in it. The successive loops containing blood could be dipped into water at half minute intervals until at the end of five minutes it was possible to tell whether the blood would coagulate promptly.

DR. CHARLES M. ROBERTSON believed the so-called hemophilic was one in which the condition of the blood was the result of some infection and changed with conditions of the patient at different times. He thought the cases which were bleeders from birth might inherit this habit, but even those might be cases which were infected in utero, in which case they may overcome the condition. He called attention to the fact that Dr. Lespinasse had operated on fifty cases under one year of age by means of blood transfusion by the direct method and had stopped the bleeding and saved the children. In operating on the nose in many instances the patient would not respond to applications of adrenalin and at a later period the effect would be good. He considered that an indication that the patient in the first instance was in the throes of an infection and that when his condition improved the coagulability of the blood assumed a normal condition. No doubt there were a few who were true hemophiliacs, but even in these cases they must eliminate the condition of the blood which might be produced by a chronic infection.

DR. HARRY KAHN believed the time of coagulation, seven, three, or ten minutes, depended upon the method and that each method must be standardized. The simplest was to take the watch, puncture the lobe of the ear, put a drop on the watch crystal, and then, with a round needle (so as not to cut up the blood platelets or corpuscles), wait until you could draw out a thread of fibrin. This usually occurred in three minutes. Cases showing a coagulation time of more than ten minutes should not be operated until the coagulation time is reduced to normal limits.

DR. HAROLD I. LILLIE said that the research laboratories of Leland Stanford had shown that calcium lactate administered preoperatively in a good many cases is ineffective except in the condition of chronic jaundice, in which the calcium was firmly bound, when it did increase the coagulability. They had also shown that sera more than a month old was ineffective; it must be fresh. Human serum is much more efficient than animal. The whole blood could be administered much quicker than to wait for the serum. He called attention to a report from Budapest of thirty-five cases of spontaneous hemorrhage in children occurring without any definite clinical sign, in which cultures from the nose showed pure diphtheritic bacilli. The cases cleared up promptly with massive doses of antitoxin. He had seen a similar case recently in which the only symptom was nose bleed; the patient was given 30,000 units of antitoxin and in three days a double otitis media developed. Incision of the ear produced a very thin pus, which was also shown to contain the typical diphtheria bacillus. This cleared up in four days.

DR. JOSEPH BECK said he had been carefully watching for a clear case of hemophilia from the point of history, but had never encountered one. He was sure that in taking histories the question of bleeding was frequently overlooked and it should be gone into more carefully. There was types of hemorrhage in which adrenalin was a specific, especially in hemorrhage of the eyes and nasal and skin bleeding in the new-born. Dr. Beck was sure adrenalin must have an effect, probably from its compensatory action, and thought this point should be made in exception to the statement that it was ineffectual. In cases where the diphtheria bacillus was found and antitoxin was given one had a right to believe that it was the antitoxin that stopped the bleeding, but he believed the serum in the antitoxin was also of value in this respect. He cited a case of Shoenlein's disease where the patient had lived for a year with hemorrhages, which were best controlled with placental blood locally applied. She afterward went to Europe, where she received gigantic doses of radium solution by injection, which stopped the bleeding almost instantly no matter where it occurred.

DR. CORWIN, closing, said he thought it was possible for a true hemophilic to outgrow the condition if they were kept alive long enough. He thought very little was understood about the condition; the blood picture was largely normal, but the clotting time was far below normal, but the platelets, according to many authorities, are not reduced as they are in purpuric conditions. While nitroglycerine might be used to lower the blood pressure, pituitrin would do the same thing, although commonly supposed to raise it. When Dr. Robertson said the disease was something hereditary he was wide of the mark, for it was *always* hereditary—more than any other disease known. He thought the points brought out by Dr. Lillie and Dr. Beck were excellent and believed the history of heredity and the personal history should always be considered.

He said the point of the paper was to bring out the sharp distinction as between a condition which was always hereditary and one with a practically normal blood picture but greatly delayed coagulation, and all the other purpuric, conglomerate forms of hemorrhage which are present today and absent tomorrow, and which have no place in the classification of hemophilia.

#### CHICAGO OPHTHALMOLOGICAL SOCIETY.

A regular meeting was held April 16, 1917, with the president, Dr. Paul Guilford, in the chair.

#### OCULAR DISTURBANCES IN PREGNANCY.

Dr. Burton Chance, of Philadelphia, by invitation, reviewed the subject of disturbance of the sight and disease of the ocular structures arising in the course of pregnancy, and he pointed out how certain are indicative of the gravest danger either to the life of

the woman, or portend the destruction of her sight. Such disturbances, he said, might arise from many causes, but the conditions chiefly considered by him were the affections of the retina, choroid and optic nerve arising in the course of the toxemia of pregnancy, wherein there is retinchoroiditis accompanied by exudation and hemorrhage. This form of retinitis must not be considered to be albuminuric in the sense that it is dependent upon the same process which produces an acute nephritis. In this connection, it is well to remember that ordinary chronic nephritis might be present before the first pregnancy, and the further fact, that actual renal retinitis may develop during the course of pregnancy. Undoubtedly, the retinitis depends upon disturbances in the kidneys, but the proximate cause of which is the toxemia which brought about the disturbance. The nephritis is not a true acute inflammation, but rather a fatty degeneration of the tubal epithelium which in favorable cases is replaced by healthy cells. In the less favorable a chronic nephritis may ensue with increased rapidity. The epithelium of the kidneys of the pregnant is sensitive to toxins, and it is this sensitiveness, perhaps, which causes the albuminuria while more pronounced disturbances might cause severe nephritis.

The ophthalmoscopic signs may not differ from those observed accompanying other forms of nephritis. In general terms there is a widespread neuro-retinitis with exudation and hemorrhage. The retinitis is toxic rather than vascular in origin, although endarteritis has been found. In the vast majority of cases, however, the findings are such as to allow us to suppose that the changes throughout the system are of a temporary nature. Few eclamptic cases show evidences of retinitis and the star figures are rarely found.

Acidosis from imperfect hepatic action is commonly associated with the toxemia. Its exact relation is not definitely established, although it is a well known clinical fact that when acidosis is corrected the general symptoms are relieved.

The onset of the symptoms is relatively prolonged; the disturbances of sight may vary from absolute blindness to temporary obscurations direct and peripheral. The prognosis in pregnancy is usually better than in the nonpregnant state, but it depends upon the location of the lesion and whether or not pregnancy can be terminated.

In general, it may be said, that retinal hemorrhages usually indicate a grave toxemia. If the hemorrhages are over the macula, and if the optic nerve is involved, while the symptoms are not heeded, during which time the toxemia becomes increased, a permanent impairment of vision is inevitable.

The prognosis as regards sight in these cases is probably not so good as is commonly thought, though as regards life it is much better than in the nephritis of the nonpregnant. Sight, however, never improves until the pregnancy is terminated. The ophthalmoscopic examination, when positive, enables one to make an early diagnosis of the underlying condition, which is sometimes by other methods difficult or im-

possible. Cases which go on to term show the largest proportion of deaths and the greatest damage to sight. Spontaneous premature delivery shows 11 per cent. of deaths, while, after artificial delivery, the mortality is but four per cent.

In conclusion, the speaker made a plea for the early examination of the eyes of all pregnant women, with the assurance that such attention should help to reduce the mortalities among them and prevent the development of disease in so vital an organ as the eye.

#### DISCUSSION.

DR. CHARLES E. PADDOCK stated that rarely does an obstetrician see a case of blindness, amblyopia or albuminuric retinitis seen in the pre-eclampsia state. He differed with the essayist, saying that there are other symptoms before the eye symptom and thought it was only in the neglected cases that the eye symptoms most frequently appear. Pregnancy has been called a disease of nine months duration—conditions are constantly arising which lead us to call it a disease—and of course the eye is not immune. The early nausea and vomiting are often accompanied by certain eye symptoms which are disagreeable to the patient, but which pass away with cessation of the so-called physiologic state.

Dr. Paddock recalled more than one case in the 6 months of pregnancy where the woman actually had eclampsia and blindness, but she recovered and went to term, the sight improving rapidly before delivery.

Pregnancy is undoubtedly the beginning of many serious eye troubles, and while it has been overlooked in the first pregnancy subsequent pregnancies increase the affection. No disease is improved by pregnancy and any woman who has retrogressive eye changes is certainly made worse.

The essayist has said that in acute nephritis, with evidence of injured vision, the pregnancy should be interrupted dependent upon the time of the pregnancy and extent of lesion. Dr. Paddock thought that under such conditions it might be better to empty the uterus regardless of the time of pregnancy. If a few days' treatment of the toxemia did not change the patient's condition there would certainly be no excuse for not making a termination whatever the time in pregnancy. He agreed with Dr. Chance that hysteria is quite prevalent, but he had seen only a few cases of hysterical amblyopia in pregnancy and in these cases the clinical findings are constant and easily diagnosed. We must always remember never to accept the hysterical diagnosis unless we have entirely cleared up all other conditions.

DR. W. A. NEWMAN DORLAND believed that advanced eye symptoms could be very frequently eliminated if the cases are kept under careful observation. The early examination of the urine, not only for albuminuria, but for a lessened urinary toxicity is very helpful. The axiom, lessened urinary toxicity means increased hemic toxicity, must be borne in mind. That means a rise in the blood pressure, and this starts just as soon as the so-called kidney of pregnancy begins. The kidney is not the seat of a nephritis, but it is a starved kidney, the cells failing to act, not because they are over-worked, but because they are not getting enough blood to work upon. The renal cells are deprived of their blood by arteriole contraction and fail to functionate. The primary action of the toxins in the blood is an almost instantaneous arteriole contraction. This can be proved by administering to any of these patients who are showing a lessened excretion of urine—before there are any eye symptoms—a vasomotor dilator, such as the fluid extract of veratrum viride and these renal cells which have not been functioning will within three to four hours throw off two or three quarts of urine. An over-worked kidney could not do that. The eye symptoms, therefore, result from an accumulation of the toxins in the blood and these can be eliminated by carefully watching the condition of the urine from the very start of pregnancy.



### MACOUPIN COUNTY

The Macoupin County Medical Society met in regular session in the Methodist church at Scottville, July 24, 1917, and was called to order by President G. E. Hill, of Girard.

A committee consisting of Drs. McMahon, Kennedy and W. L. Powell, was appointed to draft resolutions regarding the pauper practice.

The following resolutions regarding paupers were unanimously passed by the Society:

The Macoupin County Medical Society at its meeting held at Scottville, Illinois, July 24, 1917, believing that the best interests of the profession, of the poor people and of the county at large will best be served we resolve:

That services to the poor be rendered at the regular rates and in conformity with the Schedule of Fees of Macoupin County Medical Society and that we shall in future expect the Supervisor of each township to O. K. all bills as rendered, and be it further

*Resolved*, That a copy of these resolutions be given to the chairman of the Committee of Claims of the Board of Supervisors of Macoupin County.

The following resolutions regarding the Practice of Physicians who have entered the U. S. Service; were unanimously passed:

Recognizing the patriotic spirit that should control the members of the medical profession in their actions at the present time and to avoid placing a punishment on patriotism, your committee proposes the following resolutions:

*First*, That the officers and members of Macoupin County Medical Society pledge themselves to preserve intact the practice of any of their members while engaged in this gigantic struggle for freedom and deliver over to him the same on his return from such service, so far as the same shall be in their power.

*Second*, That, every member of this society shall ascertain whether a patient being treated, has had any member of our society as his physician prior to his entering service, and the physician so treating him shall make it known that he can only treat him until the return of the member from the front.

*Third*, That every physician so called or serving will receive from his colleagues one-third of the gross collections from such patients as are designated as his patients, such to be made monthly to the member or his family as he may desire.

Dr. John Deal, of Springfield, gave a very interesting address on the subject, "Conservation of Vision."

Dr. John Greene, Jr., of St. Louis, gave a very able and instructive address on the subject "Practical Methods in Ophthalmic Emergencies."

Dr. J. W. Berryman, of Scottville, gave an interesting address on the subject, "Typhoid, Its Management and Care."

A rising vote of thanks was given to the three physicians for their papers and to the physicians of Scottville for their royal welcome.

The meeting was a grand success, over forty being present and the program being much above the average.

The meeting adjourned to meet at Gillespie in September.

T. D. DQAN, *Secy.*

### OGLE COUNTY

The Ogle County Medical Society met at the Byron High School Room in Byron, July 18, 1917.

The president not being present, Vice-president Johnson called the meeting to order.

Fifteen members and seven visitors were present.

The following officers were duly elected for the coming year: President, A. H. Beebe, Stillman Velley; vice-president, J. A. Johnson, Byron; secretary-treasurer, J. T. Kretsinger, Leaf River; delegates, A. H. Beebe; alternate, F. E. Inks, of Polo.

Dr. B. A. Cottlow, of Oregon, was elected to membership.

Program: Dr. O. W. McMichael, of Chicago, superintendent of the Naperville Tuberculosis Sanitarium and an expert on tuberculosis, presented an extremely interesting lecture on "The Early Diagnosis of Incipient Tuberculosis." This subject was ably discussed by Drs. Lindholm, Maloney, Patterson, Pennimen, Beebe, Beard, Beveridge and Johnson, Dr. McMichael closing.

Dr. Gordon G. Burdick, Chicago, Professor of Physiological-Therapeutics, gave an excellent lecture on "Life Extension" illustrated with lantern slides. Discussion followed by Drs. McMichael, Beebe, Johnson and Wilgus.

Dr. L. A. Beard, chairman of sub-committee on tuberculosis war defense, Mrs. Annie G. Graham, secretary and W. A. Brayton, vice-president of the Ogle County Tuberculosis Sanatorium were present. Dr. Beard gave a talk on the need of an early diagnosis of tuberculosis of drafted men before they are sent to France.

On motion of Dr. Beveridge a rising vote of thanks were given Drs. McMichael and Burdick for their appreciative service.

The high standing of the speakers and the enthusiasm shown by the members made this meeting one of the best ever held by the society.

Adjourned to meet in regular session the third Wednesday in October, 1917.

Dr. J. T. KRETSINGER, *Secy.*

### Personals

Dr. Frederick M. Blome has removed from La Hogue to Lansing, Mich.

Dr. Henry F. Becker, Danville, has recovered from a recent appendectomy.

Dr. and Mrs. John Edwin Rhodes, Chicago, spent August on North Manitou Island.

Dr. Edward L. Moorhead has been appointed attending surgeon to the Mercy Hospital.

Dr. John L. Porter has been appointed a member of the commission on military orthopedics.

Dr. J. E. Meloy has been appointed surgeon for the Illinois Central Railroad at Peoria, Ill.

Dr. Clarence L. Wheaton, Chicago, has been commissioned major in the Medical Reserve Corps.

Dr. Nathan S. Davis III, Chicago, has been commissioned a captain in the Medical Reserve Corps.

Captain E. C. Franing, Galesburg, has been ordered to report at Camp Dodge, Des Moines, Iowa.

First Lieutenant Lester J. Palmer, M. R. C., has been ordered to Camp Grant as roentgenologist.

Dr. Maskel Lee, Atlanta, was struck by an automobile recently but was not permanently injured.

Dr. R. A. Noble, Bloomington, has been ordered to report at Fort Benjamin Harrison, Indiana.

Dr. C. C. Wehn, first lieutenant, M. R. C., Penfield, has sold his practice to Dr. Crookshank of Chicago.

Dr. G. B. Greenbaum, West Frankfort, stepped on the wrong lever in his auto and drove right into a movie theater.

Dr. Howard T. Child, Kankakee, has been elected pathologist to the State Hospital for the Insane, Norristown, Pa.

"Dr." Wm. Manella, said to hail from San Francisco, is spending a year in the bridewell, on a sentence for swindling.

Major Herman H. Tuttle, M. C., Ill. N. G., Springfield, has been appointed sanitary inspector of Camp Logan, Houston, Texas.

Dr. Walter H. Watterson, Oak Forest, has been appointed medical superintendent of the Municipal Tuberculosis Sanatorium.

Capt. W. G. Alexander, Evanston, has been transferred to Camp Dodge, Des Moines, Iowa, in charge of the department of roentgenology.

Dr. Wm. E. Park, Rockford, has been commissioned first lieutenant in the Medical Reserve Corps and assigned to Fort Benjamin Harrison.

Drs. A. S. Hunt and H. F. Threlkeld of Jerseyville, first lieutenants, M. R. C., have been ordered to Fort Benjamin Harrison for instruction.

Dr. Harry R. Hoffman, chief alienist of the Bridewell, has been ordered to report to Ann Arbor for military service as a member of the psychiatrie unit.

Dr. Arthur Lederer, formerly of the Sanitary District of Chicago, has been appointed director of the State Hygienic Laboratory of West Virginia, Morgantown.

Dr. D. S. Hager has completed the annual re-examination for sight, color-sense and heart of the trainmen of the Santa Fe System, on the eastern and western lines.

Dr. C. H. Anderson, McLeansboro, appointed by Governor Lowden, Superintendent of the Southern Illinois Hospital for the Insane, has sold his paper, the *Leader*.

Captain R. H. Garm, Beardstown, and First Lieutenants E. P. Coleman, Canton, R. B. Miller and F. C. Walsh, both of Rock Island, have been called to Fort Benjamin Harrison.

Drs. Frank P. Norbury, Springfield, and Edwin C. Hayes, Urbana, and Dr. E. C. Dudley, Chicago, have been appointed members of the State Board of Public Welfare Commissioners.

The indictment against Dr. George B. Schwachtgen, Aurora, for failure to report a case of ophthalmia in an infant, was nolle prossed at the request of State's Attorney Philips of Elgin.

Dr. Charles F. Read, formerly superintendent of the Watertown State Hospital, has been appointed superintendent of the Chicago State Hospital, Dunning, to succeed Dr. George Leininger.

Dr. Alice Barlow-Brown, Winnetka, has received an appointment abroad, and expects soon to leave for Compiegne, France, to work under the Chicago branch of the American Fund for French Wounded.

Dr. James M. Neff has returned to Chicago after an absence of more than two years at the British Base Hospital, Etaples, France. Dr. Neff has been commended in general orders for superlative service.



Major Gustavus M. Blech, commanding Illinois Field Hospital No. 2, has been appointed assistant to the chief surgeon of the Thirty-third Division, Camp Logan, Houston, Texas, and left for his new post of duty, August 21.

Dr. Harry A. Pattison, Rockford, has been appointed, by the National Association for the Study and Prevention of Tuberculosis, a medical field secretary to organize preventive work in the cantonment camps, and to follow up the men rejected for the army on account of tuberculosis.

Dr. Ralph T. Hinton, lately superintendent of the South Bartonville State Hospital, has been reappointed superintendent of the Northern Illinois Hospital for the Insane at Elgin. Dr. R. A. Goodner, managing officer of the Kankakee State Hospital, succeeds Dr. Hinton at South Bartonville.

The following physicians will join Base Hospital 12 in France, under Dr. F. A. Besley, in due time: Drs. Lyman Copps, Charles A. Short, Herbert B. Woodward, W. Stanley Gibson, Daniel R. T. Cole, Harry Siewerth, J. F. Jaros, C. E. Lindsay and J. Roscoe Harris. Twenty Red Cross nurses and forty-seven civilians are in the party.

Dr. Edward S. Godfrey, Jr., has resigned as director of the bureau of communicable diseases of the state board of health, to accept a position in the sanitary department of the New York State Department of Health. He has been assigned to the district comprising Albany and Rensselaer counties.

---

### News Notes

---

—Dentists are refusing to extract teeth for men of draft age.

—The Cook County Hospital is said to be facing a serious shortage of internes on account of the draft.

—All the doctors in Murphysboro, nineteen in all, have taken the Medical Reserve Corps' examination and pledged themselves to respond to service when called.—*Victoria Herald*.

—Five internes recently left the Henrotin Hospital on account of alleged pro-German prejudices of the management, which, however, is denied by the superintendent, Dr. John H. Chew.

—It is reported that fifty registrants in district 56, Chicago, temporarily rejected for physical defects, have been fitted for service through free surgical and dental service given by the physicians and dentists.

—The malingerers are having a fierce time with the medical examining boards. One registrant feigned deafness, but when an examiner called him a hard name, he threatened to "knock his head off." He was accepted and certified for service.

—The July meeting of the Montgomery County Medical Society was held in Coffeen Tuesday evening, July 31. Dr. F. W. Barry read a paper on "Pellagra." Dr. H. L. Yengst, of Litchfield, was elected a member of the Society.

—Dr. G. Carl Huber, professor of anatomy in the University of Michigan, Ann Arbor, recently delivered an address on "Early Stages in Mammalian Development," before the faculty and students of the graduate summer quarter in medicines of the University of Illinois.

Amante Rongetti was found guilty of having sold a false medical diploma recently, and was fined \$2,000 in Judge Fitch's court. Rongetti was indicted April 24, 1916, following action taken by the Illinois State Board of Health. Dr. Gaetano, a codefendant, was acquitted.

—At the meeting of the Rock Island County Medical Society, August 12, Dr. D. N. Eisen-drath, Chicago, gave an address: "Why Do We Have Symptoms After Gall Bladder Operations?" Dr. E. M. Sala, Rock Island, discussed the subject: "Passive Motion in the Treatment of Joint Injuries."

—Menard County, of which Petersburg is the county seat, has been announced as the winner of the Red Cross flag, made by the wife of the governor, to be awarded to the county obtaining the greatest proportional membership for the American Red Cross. Menard County, with a population of 12,796, has enrolled 3,780 as members.

—A clinic on nervous and mental diseases was held at the Watertown State Hospital, August 23, under the auspices of the Iowa and Illinois Central District Society. Cases of special interest were selected and presented by Drs. Julius Grinker, Chicago; Charles F. Reed, superin-

tendent of the hospital, and Edward A. Foley, first assistant.

—The University of Chicago Ambulance Company No. 3, under command of Capt. Elbert Clark, has been called into actual service and entrained for Allentown, Pa., August 20. The company has a personnel of 180, and takes with it six ambulances, four of which were donated by the friends of the institution and two by the American Red Cross. It also has a motor laboratory donated by the students of the university, and five kitchens on wheels.

—The medical detachment of the Third Illinois Infantry, mobilized at Rockford, has the following officers: Major Arthur E. Lord, Plano, and Lieuts. Pliny R. Blodgett, Harvard; Harry H. Davis, Monroe Center, and Fred E. Scheppler, Aurora. Two of the sergeants, Hospital Corps, are sons of the late Major Carlton E. Starrett, who served with the regiment during the war with Spain. The Adjutant-General has announced the appointment of the following administrative staff for the Medical Department: Lieut.-Col. Jacob Frank, Chicago; Major John A. Wheeler, Auburn, and Major George U. Lipschulch.

—Northwestern University Medical School announces the following faculty appointments for 1917-1918: Drs. Frederick G. Harris, professor of dermatology and syphilology, succeeding Prof. Joseph Zeisler, who becomes professor emeritus of dermatology; Frank C. Becht, professor of pharmacology, succeeding Prof. Hugh McGuigan; John Ridlon, honorary professor of orthopedic surgery; John L. Porter, professor of orthopedic surgery; Herbert A. Potts, professor of oral surgery; Frank E. Simpson, adjunct clinical professor of dermatology; Charles P. Caldwell, adjunct clinical professor of medicine; Edward L. Moorhead, adjunct clinical professor of surgery.

—The state board of health has announced the creation of four special health districts, each embracing a zone adjacent to a military or naval camp site. These districts are as follows:

1. Camp Grant district, including the city of Rockford: Medical officer, Dr. Charles E. West, Springfield; sanitary health officer, P. H. Cooney, Chicago.

2. Great Lakes—Fort Sheridan district: Health officer, Dr. John Kappelman, Mt. Vernon; sanitary officer, Dr. Jerome Smejkal, Chicago.

3. Lincoln-Lowden District, including the city

of Springfield: Medical health officer, Dr. John J. McShane; sanitary officer, Edward Cowles.

4. Camp Chanute Aviation District, including Rantoul: Medical and sanitary officer, Dr. John J. McShane, Springfield.

The executive officer of each of these districts will be the medical health officer, and will report directly to the secretary of the state board of health.

---

## Marriages

MAX PETER GETHNER, M. D., to Miss Lillian Livshis, both of Chicago, recently.

ISIDORE E. KOHN, M. D., to Miss Dolly Newman, both of Chicago, August 12.

ROSE E. ELVIDGE, M. D., Longview, to Miss Grace Howard, at Tuscola recently.

ROBERT H. HERBST, M. D., Chicago, to Miss Marion Mabel Steeves of Boston, recently.

THOMAS B. KELLY, M. D., to Miss Esther Allais, both of DuQuoin, recently.

MILTON EDWARD ROSE, M. D., Chicago, to Miss Dorothy J. Shade of Decatur, Ill., July 21.

WILLIAM C. SCHIELE, M. D., Galena, Ill., to Miss Anna Reifsteck of Hanover, August 15.

NICHOLAS ISRAEL FOX, M. D., Chicago, to Miss Evelyn Adele Hattis of Oak Park, Ill., July 5.

LEON WOODFORD KELSO, M. D., Paxton, Ill., to Miss Eleanor Watts of Carlinville, Ill., at Paxton, July 21.

ASST. SURG. HUGH JOHN DUFFY, U. S. Navy, Chicago, to Miss Jessie Sullivan of Denver, at Chicago, August 9.

---

## Deaths

RICHARD SOBEY, Chicago (license, Illinois, 1895); died at his home, July 31.

JAMES A. BRADFORD, M. D., Macedonia, Ill.; University of Louisville, Ky., 1910; aged 33; died at his home, June 28.

JOHN CHARLES MCENERY, M. D., Chicago; Rush Medical College, 1897; aged 48; died at his home, about July 9.

LOGAN O. COX, M. D., Hallidayboro; University of Tennessee, Memphis, 1882; aged 60; died in East St. Louis, August 9.



FERRE JOEL WALKER, M. D., Maquon, Ill.; College of Physicians and Surgeons, Keokuk, Ia., 1896; aged 51; died in Brunswick, Mo., April 13.

DAVID HENRY STERN, M. D., Chicago; Eclectic Medical College of the State of New York, 1892; aged 71; died at his home in Chicago, August 24.

GEORGE W. HUGHES, M. D., Armstrong, Ill.; Illinois Medical College, Chicago, 1900; aged 44; a Fellow of the American Medical Association; died at his home, June 9.

ROBERT ANDREW KERR, M. D., Peoria, Ill.; Rush Medical College, 1881; aged 60; formerly a member of the Illinois State Medical Society; died in Petoskey, Mich., August 3.

GEORGE ELMER BUSHNELL, M. D., Rochelle, Ill.; Hahnemann Medical College, Chicago, 1885; aged 52; formerly a Fellow of the American Medical Association; died at his home, July 17.

HANNAH LEAH NICHOLS SCHMALLING, M. D., Fulton, Ill.; University of Michigan, Ann Arbor, 1885; aged 54; a Fellow of the American Medical Association; died at her home, July 14.

LEWIS MARION PERRY, M. D., Broadwell, Ill.; University of Louisville, Ky., 1868; aged 80; formerly a Fellow of the American Medical Association; died at his home, July 17, from neuritis.

ALBERT EUGENE GREER, M. D., Brownstown, Ill.; Marion-Sims Medical College, St. Louis, 1895; aged 49; a Fellow of the American Medical Association; died at his home, July 3, from pneumonia.

FREDERICA R. BAKER, M. D., Chicago; Hahnemann Medical College, Chicago, 1895; aged 52; formerly a member of the Illinois State Medical Society; died at her summer home, near Peacock, Mich., August 7.

EUGENE FRANCOIS MARGUERAT, M. D., Chicago; Rush Medical College, 1895; aged 47; a member of the Illinois State Medical Society; died at his home in Chicago, August 9, from chronic gastro-enteritis.

JOHN E. BROCK, M. D., Arkansas City, Kans.; Rush Medical College, 1890; aged 56; a Fellow of the American Medical Association; a member of the Kansas State Medical Society and the Cowley County, Kansas Medical Society; died at his home from nephritis, August 19, 1917.

FREDERICK A. RETTIG, M. D., Chicago; Rush Medical College, 1894; aged 48; a Fellow of the American Medical Association and president of the staff of Alexian Brothers Hospital, with which he had been associated for twenty-five years; died at his home, July 21, from myocarditis.

BLAKE EDWIN RAY, M. D., Cuba, Ill.; College of Physicians and Surgeons, Chicago, 1913; aged 26; a member of the Illinois State Medical Society, and secretary-treasurer of the Fulton County Medical Society; died at the home of his parents in Cuba, July 25, from acute nephritis.

## Book Notices

THE ROENTGEN DIAGNOSIS OF DISEASES OF THE ALIMENTARY CANAL. By Russell D. Carman, M. D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic and Albert Miller, M. D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 pages with 504 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$6.00 net; half Morocco, \$7.50 net.

The authors of this work have covered the entire digestive tract based on their experiences as roentgenologists to the Mayo Clinic. They have included a great many case reports in an endeavor to bring out the salient points under discussion. Their errors and mistakes have not been neglected. They have been cited so that the reader can evade making the same errors.

The illustrations, which are profuse, help to simplify the text materially. References, at least the most important, are inserted. Altogether we believe that the authors can be well proud of their first effort, as it is undoubtedly one of the most complete text books on this subject.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 1 Number 1 (The Johns Hopkins Hospital Number, July, 1917). Octavo of 193 pages, 14 illustrations. Philadelphia and London, W. B. Saunders Company, 1917. Published Bi-monthly. Price per year: Paper, \$10.00; cloth, \$14.00.

The new edition of Medical Clinics, bearing the name of The Medical Clinics of North America, is started off by the staff of Johns Hopkins Hospital. The general features of the clinics remain the same, excepting that the contributions are from various medical centers, instead of from Chicago only, as formerly. We believe this inclusion will greatly enhance the usefulness and worth of the clinics. The present volume has as contributors Drs. Janeway, Barker, Mosenthal, Fitcher, Hamman and Brown. Some of the titles are: Hodgkin's Disease, Postural Albuminuria, Meningitis, Hypertension, Acromegaly and Gastrop-tosis.

THE BABY'S FOOD. By Isaac A. Abt, M. D., Professor of Diseases of Children in the Northwestern University Medical School, Chicago. 12 mo. of 143 pages. Philadelphia and London, W. B. Saunders Company, 1917. Price \$1.25 net.

This is a handy volume for the physician as well as the nurse in the preparation of babies' foods. All recipes and instructions are fully given so that any food proper for babies may be made up. A chapter on the various kinds of baths for babies is also included. The recipes are not original, but a collection of those that have proved valuable in Dr. Abt's experience. It should be a great aid in the teaching of mothers the proper diet and method of preparation.

PRACTICAL MATERIA MEDICA AND PRESCRIPTION WRITING WITH ILLUSTRATIONS. By Oscar W. Bethea, M. D., Ph.G., F. C. S., Associate Professor of Ma-

teria Medica and Instructor in Prescription Writing, Tulane University of Louisiana; formerly Professor of Chemistry and Professor of Pharmacology, Miss. Medical College, etc. 2nd Revised Edition. F. A. Davis Co., Philadelphia. Price, \$1.50.

The changes brought about by the latest revision of the U. S. P. necessitated the issue of this second edition. Many new drugs are added, and some have been dropped.

The division of this work is in three parts: Part one, *Materia Medica*; Part two, *Prescription Writing*; Part three, *Illustrations showing incorrect and correct forms in prescription writing with actual examples*. It is well gotten up and should prove very useful to the medical students.

**THERAPEUTICS, MATERIA MEDICA AND PHARMACY**, The Special Therapeutics of Diseases and Symptoms, The Physiological and Therapeutical Actions of Drugs, The Modern *Materia Medica*, Official and Practical Pharmacy, Prescription Writing and Antidotal and Antagonistic Treatment of Poisoning. By Samuel O. L. Potter, M. D., M. R. C. P. London, formerly Professor of the Principles of Practice of Medicine in the Cooper Medical College of San Francisco; Author of the "Quiz-Compend of Anatomy" and "*Materia Medica*," etc. 13th edition revised and enlarged by Elmer H. Funk, M. D., Associate Professor in Medicine, Jefferson Medical College, Philadelphia; Medical Director and Physician in charge of the Department for Disease of the Chest of the Jefferson Hospital, etc. P. Blakiston's Son & Co., Philadelphia. Price, \$6.00.

This new edition of Potter, which has been a standard text book for years, brings it to date. The various changes, additions and omissions of the U. S. P. have been observed closely, likewise of the N. F. As a standard, up-to-date and complete work, it can be safely used as an authority.

**POLIOMYELITIS IN ALL ITS ASPECTS**. By John Ruhrah, M. D., Professor of Pediatrics, University of Maryland Medical School and the College of Physicians and Surgeons; Consulting Pediatrician to Bayview Hospital, etc., and Erwin E. Mayer, M. D., First Lieutenant in the Medical Officers Reserve Corps, U. S. Army; Formerly Senior Resident Physician at the Mercy Hospital, etc. Illustrated with 118 engravings and 2 plates. Lea and Febiger, Philadelphia & New York. Price, \$3.25.

This book is an important addition to our knowledge of this much dreaded and much discussed disease. It is a thoroughly practical as well as scientific book, and can be depended upon thoroughly in the study of this condition. The name of the senior author is a guarantee of its worth. It is one of the best books on this subject, and cannot be too highly recommended.

**FIRST LESSONS IN SPOKEN FRENCH FOR DOCTORS AND NURSES**. By Ernest H. Wilkins, Algeron Coleman

and Ethel Preston. The University of Chicago Press, Chicago. Price, \$0.50; postpaid, \$0.54.

This is an interesting little volume gotten up especially for doctors and nurses who expect to serve in France. It is small enough to carry in the pocket, and its contents are presented simply. It will not make one proficient, but as a starter, and for use in hospitals, it should prove useful.

**NUTRITION AND CLINICAL DIETETICS**. By Herbert S. Carter, M. A., M. D., Associate in Clinical Medicine, Columbia University; Associate Attending Physician to the Presbyterian Hospital; Consulting Physician to the Lincoln Hospital, New York, and Paul E. Howe, M. A., Ph. D., Assistant of Biological Chemistry, Columbia University, New York, and Howard H. Mason, A. B., M. D., Instructor in Diseases of Children, Columbus University, New York; Associate Attending Physician to the Presbyterian Hospital; Attending Physician to the Ruptured and Grippled Hospital, New York. Price, \$3.50. Lea & Febiger, Philadelphia and New York, 1917.

To those wishing to study the scientific together with the practical side of dietetics, this volume by Doctors Carter, Howe and Mason will prove useful. It is one of the most practical works we have seen dealing with this particular subject.

The first part of the book deals largely with physiology, digestion and metabolism. Several chapters are devoted to foods and food values. Feeding of infants and invalids in general is discussed. A large portion of the volume is devoted to diet and feeding in all the diseases where special dietary is of service.

This work is scientific, yet not so technical as to be either tedious or difficult to understand. It covers a large field in as brief a manner as is consistent with clearness and completeness.

Every nurse, especially, should possess a copy and study it, as often nurses are sadly deficient in the matter of foods and food preparation. The book, however, is intended for physicians.

**PRACTICAL TREATMENT, Volume IV**. By 76 eminent specialists. Edited by John H. Hussed, Jr., M. D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo 1,000 pages. Illustrated. Philadelphia and London, W. B. Saunders Company, 1917. Cloth, \$7.00 net; half morocco, \$8.50 net.

This fourth volume of Musser-Kelly brings the complete system up to date. A perusal of its pages discloses all the newest advances in the treatment of disease. Practically all the contributors of this volume were contributors of the previous ones, each retaining his special section, allowing him to bring his own particular article thoroughly up to date. Some of the additions are quite extensive, others only a few lines, depending upon the importance of the newer things or methods in treatment. It is a welcome addition to the previous volumes.



# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. XXXII

CHICAGO, ILL., OCTOBER, 1917

No. 4

## Original Articles

### THE ADVISABILITY OF PROSTATECTOMY IN THE PRESENCE OF CORD LESION.\*

E. S. JUDD, M. D. AND W. F. BRAASCH, M. D.  
ROCHESTER, MINNESOTA.

In the examination of the central nervous system of patients with urinary incontinence following a prostatectomy it is not uncommon to find definite evidence of cord lesion. On investigation it is usually discovered that the patient had complained of urinary difficulty even prior to the prostatic age and that definite evidence of a central nervous system lesion had been overlooked. The urinary symptoms were evidently the result of disturbance in the central nervous system and were not caused by the enlargement of the prostate that may have been felt per rectum. Even when no such enlargement was palpated the surgeon may have felt justified in advising a prostatectomy because of the possibility of median lobe obstruction. It is now recognized that urinary obstruction may be due to many conditions other than those discovered by means of rectal palpation and the urethral sound. When any doubt remains, the etiologic factor can usually be ascertained by a careful examination of the nervous system and by cystoscopy.

The physical examination of a series of patients who had cord lesions and who complained of urinary disturbance, showed that evidence of the lesion in the central nervous system is often apparent even on casual examination. Occasionally, however, the cord lesion is obscured and is discovered only after a careful search. Rectal examination of patients with advanced cord lesions and urinary difficulty shows that the prostate is apparently smaller than normal, the periprostatic tissues are often flabby, and any slight degree of prostatic enlargement that may be present seems to give on pressure as though there

was no resistance in the tissues back of it. Occasionally, however, the urinary difficulty seems to be caused by a well-marked enlargement of the prostate and only on careful examination is definite evidence of cord lesion determined in addition. The question then arises: Are we justified in performing prostatectomy in the presence of a cord lesion?

The decision as to the advisability of an operation will usually depend on the relative degree of the symptoms of obstruction due to the enlargement of the prostate and the extent of the nerve lesion. Although operation is usually contraindicated by incontinence, it may occasionally be advisable. If the incontinence is due to weakness of the external sphincter, prostatectomy is not advisable, but if the incontinence is due to overflow of retained urine, as is not infrequently the case in uncomplicated hypertrophy of the prostate, the operation may be justified. The tone and strength of the muscular coat of the bladder are best estimated by watching the change in the amount of residual urine and the force with which the stream is propelled through a catheter. If the tone is good, the urine is passed vigorously until the bladder is empty, without the use of the accessory abdominal muscles. If the muscular tone is failing, the stream flows quietly, its force being altered by any change in the abdominal muscles and by respiratory movements. It may require pressure with the hand to completely empty the bladder. Under these circumstances the organ does not contract uniformly but often falls into folds leaving separate pouches filled with urine. In such cases over-distention may temporarily increase the impairment of tone. It is said that the persistent use of a catheter sooner or later results in complete distention, and that in two years' time the expelling power will not return. This may be true when the difficulty is due to a nerve lesion. On the other hand, if the obstruction is mechanical, a catheter may be used for many years without any impairment of the expelling power and the patient will completely empty his bladder

\*Presented before the Illinois State Medical Society, Bloomington, Ill., May 9, 1917.

after the obstruction has been removed. The overflow, often observed in the presence of prostatic enlargement, usually begins at night when the patient is relaxed, but may be brought on by sudden exertion.

Incontinence is not a common symptom of uncomplicated prostatic enlargement. If there is true incontinence, the bladder is always found empty since the urine passes out as quickly as it enters, but if the leakage of urine is due to overflow, the bladder is always completely filled and just a small amount escapes.

Incontinence may be due to the fact that the enlargement of the prostate keeps both the external and internal bladder sphincters continuously relaxed. However, we have never found total incontinence of urine due to enlargement of the prostate. In many cases of enlargement of the prostate we have seen a loss of function of the internal sphincter so that the bladder and prostatic urethra were one continuous cavity, but in all instances the sphincter external to this part of the urethra was normal and did not allow the urine to escape. This shows how important it is not to disturb the external sphincter in operating for enlargement of the prostate.

True incontinence is usually due to the lesion in the nervous system. With the exception of trauma, *tabes dorsalis* is the most common form. Bladder symptoms may be the very first indication of locomotor ataxia, and as the enlargement of the gland and *tabes dorsalis* occur at about the same age and time of life, it is easy to make a mistake in the diagnosis by attributing the urinary symptoms to the enlargement of the gland, when in reality, they are due to the condition of the nervous system. In only a few selected cases of co-existing enlargement of the gland and *tabes dorsalis* should operative interference be undertaken. It is easily seen that if the condition is due to a lesion of the nervous system relief will not be obtained by operating, and in all probability many patients are better off with some mechanical obstruction due to the enlarged gland than they would be with the obstruction removed and with total incontinence of urine. All tabetics do not have involvement of the portion of the cord which controls the urinary mechanism so that a person may have *tabes dorsalis* and also have good control of the bladder sphincter. Fortunately, the

presence or absence of sphincter control can be demonstrated by a careful cystoscopic examination. If the cystoscopist finds that the sphincter is functioning and that the symptoms are due to the enlargement of the prostate, it is proper to remove the gland, since good functional results are obtained even though *tabes* is present. This is a very important consideration. We have frequently observed patients with a loss of sphincter control who said that under these circumstances existence was almost unbearable. When there is not a total incontinence but extreme urgency of urination, the condition is nearly as distressing because it necessitates the wearing of a urinal in order to keep the clothing dry. The functional result must be one of the chief considerations in all prostatic and bladder cases. It should be very carefully considered before any operation is attempted, especially if the patient is suffering from *tabes dorsalis*. When the clinical evidence of advanced cord lesion is well marked, there being ataxia, cerebral symptoms or incontinence resulting from weakness of the external sphincter, operation would, of course, be contra-indicated. If, however, the cord lesion is determined only after a careful, painstaking examination it may be necessary to make a careful cystoscopic examination in order to determine the major factor in the urinary obstruction.

The data obtained by cystoscopic examination of patients suffering from lesions of the central nervous system are of much importance in the differential diagnosis. In instances in which the urinary obstruction is caused by such cord lesions, typical changes in the appearance of the interior of the bladder. Caulk and Greditzer<sup>1</sup> maintain served by cystoscopic and urethroscopic examination. The changes usually regarded as typical and which are most prominent are the characteristic trabeculation and relaxation of the sphincters. The trabeculae are not as coarse as is usual when there is mechanical obstruction. They appear more ridgelike and frequently extend continuously over a large part of the circumference of the bladder. Caulk and Greditzer<sup>1</sup> maintain that the condition of the sphincters is of greater importance in the diagnosis. In a recent article, they described the relaxed condition of the internal sphincter and prostatic urethra. This atonic

1. Caulk, J. R., and Greditzer, H. G.: Observations on the bladder in diseases of the central nervous system. An analytical study.



state of the prostatic urethra is usually accompanied by a reduction in sensation.

In reviewing the surgical records of the Clinic it was found that a prostatectomy has been done in nine patients in whom there was definite evidence of a cord lesion on clinical examination. There were also a number of patients with well-marked hypertrophy of the prostate who gave a definite history of early lues. Several of these had a positive Wassermann reaction, but no clinical evidence of a cord lesion and were consequently not included in this series. A study of the clinical data and a review of the postoperative results obtained is of considerable interest.

As regards the subjective symptoms other than the urinary difficulty, there was an absence of definite data and more confusion than is usual in cases of cord lesions. The examination of the nervous system of most of the patients operated on showed that the upper portion of the cord was more involved than the lower. The absence of incontinence after the operation in all cases would seem to corroborate the accuracy of the preoperative examination of the nervous system. Only three patients of the nine gave a positive history of having had an initial lesion. Two gave a history of having had pain referred to the extremities, and this only to a moderate degree. A slight degree of ataxia was noted in two patients. Although in six cases the onset of symptoms had occurred more than ten years previous to our examination, in only one had it been noted before the prostatic age. The initial symptom was usually frequency of urination, difficulty becoming predominant later. The catheter was used entirely in five cases and partially in the remaining five. A slight degree of incontinence was complained of in two cases. In both of these, however, there was a large amount of residual urine and the incontinence might be explained in part as being an overflow.

Examination of the nervous system revealed the fact that the different reactions varied from the normal to a moderate degree. The patellar reflex was entirely absent in two cases and markedly exaggerated in two. The Argyll-Robertson pupil was present in four cases, a definite Romberg in three, and a moderate ataxia in two. The Wassermann reaction was positive in two cases and negative in five. The amount of residual urine varied from 1 to 14 ounces in the five cases in which the catheter had been partially used.

The functional tests (phthalein) in all cases were more than 40 per cent. at the time of the operation.

On cystoscopic examination, as might be expected, the evidence of cord lesion was overshadowed by the changes resulting from mechanical urinary obstruction. The internal sphincter was relaxed in one case, but the external sphincter was not relaxed in any. As is usual in the presence of a cord lesion, cystitis was present only in a moderate degree. Stone in the bladder was a complication in one case. The degree of trabeculation was marked in only five cases, a fact suggestive of cord lesion. It would seem that when the gland is enlarged it might be difficult to determine by cystoscopic examination whether or not the urinary sphincters are relaxed. However, the knowledge of the exact degree of relaxation may not be necessary to determine the advisability of operation, since the character of the trabeculations and the appearance of the bladder wall together with the presence or absence of incontinence and the clinical findings will usually offer sufficient data.

During this same period a large number of patients were examined who had well-marked clinical evidence of cord lesions, and more or less residual urine. On cystoscopic examination they also showed definite evidence of cord lesion. Some of these patients had a moderate degree of hypertrophy of the prostate and the advisability of prostatectomy might have been considered. However, the general condition, the well-advanced degree of the cord lesion as evidenced by the clinical symptoms, the dilated atonic bladder and the relaxed condition of the sphincters contra-indicated operation.

In the majority of patients in advanced stages of tabes, however, even though retention is present the prostate appears smaller than normal upon palpation per rectum, and there is an abnormal relaxation of the tissues about the prostatic area. Therefore the advisability of operation would depend largely on the comparative degree of cord involvement. When it is evident that the sphincter itself is not relaxed, that there is sufficient hypertrophy of the prostate to account for the urinary obstruction, and that the general condition is favorable, prostatectomy may be attempted. Young<sup>2</sup> in an article in which he

2. Young, H. H.: A new procedure (punch operation) for small prostatic bars and contracture of the prostatic orifice. *Jour. A. M. A.*, 1913, LX, 253-257.

described a punch operation for removing medium bars also says he has operated on several tabetics in this way with fairly satisfactory result.

In this connection we may refer also to the so-called atonic bladder. This condition which has been fully described by Walker,<sup>3</sup> is characterized by a dilated bladder and residual urine without any definite evidence of disease in the nervous system or any clinical cause to account for the obstruction. Another cause for urinary obstruction is occasionally observed in cases in which the prostatic hypertrophy obstructs the urethra without causing an enlargement that can be palpated on rectal examination or observed by cystoscopic examination. Urethroscopic examination alone will reveal a peculiar overlapping of the lateral prostatic lobes which may cause marked urinary obstruction.

Answers to letters of inquiry relative to the postoperative results in these nine cases have been received from eight of the patients. One patient died eighteen months after the operation. The other eight are reported in good condition and have no urinary difficulty except in one instance. The latter was the last patient in the series to be operated on, the operation having been performed some six months ago. He still complains of considerable frequency of urination and recently of a slight degree of incontinence. The results indicate that prostatic hypertrophy was the predominant factor in the obstruction. Three of the patients underwent a thorough course of anti-syphilis treatment, including injections of salvarsan. This treatment seemed advisable, following the operation, as a preventative measure.

#### CASE REPORTS

Case 52394, a patient 72 years of age. No history of lues or previous diseases. He had had trouble for fourteen years, beginning with increased difficulty in urinating. A catheter had been used part of the time recently; some pain in the suprapubic region, perineum and bladder. A general examination of the nervous system did not reveal a cord lesion. Cystoscopic examination showed 14 ounces of residual urine, and a typical picture of cord bladder. Cystitis (1 on a scale of 4). Trabeculations were typical of cord lesion. Suprapubic prostatectomy was performed July 28, 1911. The patient returned about a year later for the removal of stones. The use of a catheter was necessary occasionally, although the functional

result was fair and apparently much benefit was derived from the operation.

Case 63477, a patient, 51 years of age, who gave a history of having had lues. He came for treatment for urinary difficulty which had started two years previously. Bladder symptoms were marked; a catheter had been used continuously for three weeks, and there was considerable sacral pain. Examination of the nervous system showed that there was slight urinary incontinence. Right patellar reflex absent, left exaggerated. Pupillary reflexes slow. Rhomberg absent. One ounce of residual urine; prostate enlarged, 2; a moderate degree of cystitis. The cystoscopic picture was not wholly characteristic. Blood Wassermann test positive. A suprapubic prostatectomy was performed Jan. 10, 1912, and a good functional result was obtained. One month after the operation it became necessary to pass a sound a few times.

Case 74852, a patient 70 years of age, with a history of five years of urinary difficulty. Three years previously he had had an attack of sudden retention; he complained of pain in the back, legs and suprapubic region. Examination of the nervous system showed an absence of patellar reflexes. Ataxia was marked. Examination of the bladder showed enlargement of the prostate, 3. The urine was all residual. There was marked typical bladder trabeculation. Suprapubic prostatectomy Oct. 14, 1912. Following the operation he had a little difficulty in urinating. He died in March, eighteen months later.

Case 82406, a patient 65 years of age. Three weeks before coming for examination he had had a severe hemorrhage from the bladder. During the past two years he had had slight hematuria and had used a catheter almost continuously for several weeks. Examination of the nervous system showed most of the characteristic symptoms of tabes. Examination of the bladder showed that all of the urine was residual; cystitis 2, stones in the bladder and marked trabeculation of the typical cord lesion type. Blood Wassermann test positive. Suprapubic prostatectomy was performed April 30, 1913. A large tabetic bladder with a thick wall and poor contracting power was found. The result in this case was very satisfactory, although stones formed in the bladder and were removed elsewhere a year or more later.

Case 89916, a patient 62 years of age, who gave a history of having had lues. He came because of urinary difficulty which he had had for six months. A catheter had been used continuously for two months. He had an Argyll-Robertson pupil and a Rhomberg. Cystoscopic examination showed a typical cord bladder, and in addition, considerable cystitis. The trabeculation was characteristic. Suprapubic prostatectomy April 4, 1916. At the present time this patient reports that he has gained 20 pounds and has no urinary difficulty or hematuria.

Case 107150, a patient 54 years of age, with a history of having had an injury to the spine thirty-three years previously. Since that time there had been some difficulty in urinating, though most of the trouble had come in the last three years. A catheter had

3. Walker, J. W. T.: Atony of the bladder without obstruction or signs of organic nervous diseases. *Ann. Surg.*, 1910, lii, 577-596.



been used a part of the time. Examination of the nervous system showed an absence of the patellar reflexes. Bladder examination revealed 10 ounces of residual urine. The internal bladder sphincter was relaxed and there was considerable cystitis and very marked trabeculation of the cord lesion type. Suprapubic prostatectomy June 17, 1914. A very large, thick-walled bladder was found, and after the operation there was a moderate degree of incontinence which persisted for several months. This gradually lessened and at the present time the functional result is very good, the patient reporting that he has no trouble of any kind.

Case 114446, a patient 74 years of age. He had had some sort of injection over the bladder region fifty-three years previously. He had had frequency for about twenty years and had used a catheter almost continuously for three years. Examination of the nervous system showed slight urinary incontinence; patellar reflexes absent; Rhomberg present; ataxia. Bladder examination showed nearly all the urine to be residual; cystitis 2, with the characteristic trabeculations and relaxation of the bladder seen in these cord cases. A suprapubic prostatectomy was performed Sept. 24, 1914, with a good result except that the frequency persists and urination occurs every few hours.

Case 177201, a patient 68 years of age, who had had urinary frequency for fifteen years and had used a catheter off and on for two years. He complained of some pain in the legs. Examination of the nervous system showed that the patellar reflexes were diminished and the pupils responded slowly; Rhomberg present. A bladder examination showed 6 ounces of residual urine; cystitis 2. A suprapubic prostatectomy performed Nov. 21, 1916, had a satisfactory result as far as function is concerned but the cystitis has persisted, and occasionally there is some difficulty of urination and the passage of a little blood.

Case 178746, a patient 67 years of age, with a history of having had lues. He came because of difficulty of urination which began ten years before. He had used a catheter off and on for nine months. On examining his nervous system it was found that the pupillary reflexes were unequal and sluggish. Rhomberg was present. Bladder examination showed 8 ounces of residual urine with cystitis and typical trabeculations. A suprapubic prostatectomy was performed Dec. 20, 1916, and was an entire success. The patient still complains of feeling awkward below the knees.

## OUR STATE HOSPITALS' STRAITS\*

SIDNEY D. WILGUS, M. D.,

ROCKFORD, ILL.

### INTRODUCTION.

What conditions of treatment surround over 17,000 patients detained in our State hospitals

\*Read June 4th, 1917, at meeting of Aliipists and Neurologists at Chicago.

for the insane? They come from the average American homes. The records show that the occupations of the patients before their earning capacities were destroyed included many important pursuits. Of 2,500 male cases, nearly 400 had been engaged in commercial pursuits; 100 in the various professions; 300 in agriculture; 800 as artisans. Of 2,400 female patients, one-half had been actual wage earners, and the other half housewives. These people are not paupers, we can see. Producers and tax payers as they are and springing from the average American homes, their medical and nursing care and their per capita money allowance should be equal, at least, to that of other communities of like enlightenment and wealth.

That a record in philanthropy had been set in the management of public institutions was the statement made by a high public official at Springfield a few months ago. The *Institution Quarterly* is the publication through which the Board of Administration and the Charities Commission make public such matters as seem to them of interest and good policy. The *Quarterly* has been so uncritical of affairs, that one might well be justified in believing the remark of the statesman.

Much depends on one's point of view, so let us narrate some of the predisposing factors, theories applied thereto, results obtained from their application; and then base judgment on the fruit of recent past activities in the service.

### NEW POLICIES

Within the past four years innovations reflecting on the care of the patients were instituted not only in matters pertaining directly to the treatment of patients but also indirectly through new methods of handling the employees.

Five changes were made in this policy regarding the ward nurses and attendants, namely, (a) three shifts instead of two, (b) alteration in the time off, (c) weekly rotation of shifts, (d) unions introduced, (e) increased pay.

In more detail, these changes are considered as follows:

(a) Three shifts. A two-shift system had been in existence in Illinois from the time State hospitals were started. The night shift served from ten to twelve hours and the day shift the remainder of the time. Certain extra duty was also demanded on occasions. There has been no

disagreement over the statement that these hours were long, although sanctioned by use all over the world, and four years ago various superintendents were of their own volition, arranging a ten-hour schedule with sixty-two days off duty per year.

It is notorious that the attendant and nursing force is very unstable and changes occurred frequently not only in Illinois, but in all state hospitals throughout the United States, Canada and in the United Kingdom.<sup>1</sup>

Theorists failed not to advance the view that shorter hours of service and other innovations would affect favorably the frequent changes and thus conduce to the better care of the patients.

Taking this for granted and without competent investigation, the authorities issued a rule that the working hours for nurses and attendants should not exceed eight hours per day. As part of this theory it was claimed that for obvious reasons no more employees would be required than under the longer hours of employment.

(b) The "One Day Off in Seven" Rule: Under former conditions the attendants were off duty a half day a week, every third Sunday, six holidays and two weeks vacation, or approximately 62 days in all. This new rule gives them one day off in seven and two weeks vacation and the rotation plan also allows two extra days per month, or 87 days in all.

(c) Weekly Rotation. Under the old system a given set of employees were in charge of a ward and its patients throughout working hours and this being their permanent place of duty the patients and their peculiarities were well known. The present system gives two complete sets for the same period. To "equalize" the work it was ordered from Springfield to rotate these employees at the end of each week. The changes from ward to ward that were necessary under this method and the presence of many on temporary duty proved additional confusing factors.

d) Unions. Many of the mechanics were always members of the unions. The first Board of Administration consulted union leaders and arranged a wage schedule to give the mechanics a yearly income equal to that of union mechanics outside. The State hospitals were open shops and all mechanics, whether union or non-union,

were on the same basis. The last State Board of Administration saw fit to issue *General Orders Number 142*, reading as follows: "The attitude of the Board toward all of these organizations is one of toleration, and in its effort to better mankind and improve conditions social, economic and moral, it is one of sympathy and encouragement and *under no circumstances, the reverse. The rule of unrestricted freedom is the policy of the Board.*"

Under this permission, the unions proceeded to organize the nurses and attendants as well as the other lines of endeavor, except the physicians.

(e) Increased Pay. The executive secretary of the Charities Commission investigated the working conditions and wages in a representative state hospital in 1912. The report to be found in the *Institution Quarterly* indicates that the working conditions and living conditions were equal to those of any other state and the wages compared very favorably with those of other states. Notwithstanding this, the authorities (first) raised the minimum wage of all women attendants from \$20.00 to \$25.00 (with complete maintenance); (second), an increasing graduated scale of wages was adopted for all employees except those receiving union wages by the day; General Orders No. 133, Page 10, fixed the wages of mechanics at the current union scale, this (third), involved an abrupt jump of about 50 per cent for this class of employees.

*No preparation of finances was made to cover possible gross increase from any of these sources and a deficiency appropriation was foreseen only late in the day.*

Resume. The actuating theory regarding the above is to be taken that these acts of "Social Justice" would bring to the nursing and attendant service a more willing and efficient body of employees who in turn were to translate their more intense and fresher activities into lines of benefit to the patients. As the result differed quite radically from that expected, many perplexing conditions and problems arose.

Then with our per capita a fixed sum, the number of attendants actually increased, their wages increased and mechanics' wages increased. The result was what might have been anticipated but which was not, namely, a deficiency.

*When the fact became evident to the admin-*

1. Note: Last year certain New England manufacturers using the same grade of help were forced to employ annually 42,000 people to keep 6,700 vacancies filled. (Annals of Academy of Political and Social Science.)



istration that a tremendous deficiency would result, then cuts in all grades of employees were made right and left.

#### RELATIVE STANDING OF THE SERVICE.

*Questionnaire.* So what conditions surround our 17,000 patients as a result of the foregoing? To establish some standard for comparison of service, a questionnaire covering matters pertaining to the medical and nursing service were sent to all state hospitals of this country and Canada. Approximately 60 answers were returned full enough for the purpose.

#### THE RESULT OF DECREASED FORCES.

*Staff.* One measure of efficiency is numbers. A sufficiency of physicians do competent and constructive work (Physical and mental examinations; case records; medical diagnosis and treatment; laboratory diagnosis and treatment; personal care, occupation therapy, etc.; also study, original work and paper writing); an insufficiency means "group" or archaic treatment and that only. What Illinois came to last year is shown here:

	Ratio of Physicians to Patients
Forty-eight widely spread American institutions outside of Illinois supply.....	1 : 210
Standard set by English Commission on Lunacy .....	1 : 150
Italy has set by law.....	1 : 100
Germany provides .....	1 : 100
Illinois, 1914, report showed.....	1 : 160
Illinois institutions report (in May) approximately 60 <sup>2</sup> physicians on duty for over 17,000 patients .....	1 : 280
This is the lowest ratio to be found in any state or country pretending to do average scientific work.	

*Supervision.* Supervisors are the non-commissioned officers. Non-commissioned officers carry orders and enforce them; public opinion in the ranks is largely dependent on them. As in the army, numbers and efficiency go hand in hand.

As to numbers after the cut:

	Ratio of Supervisors to Patients
In 63 hospitals outside of Illinois.....	1 : 321
Illinois ratio on duty under three shifts.	1 : 1200-1700

Not an administrator maintains that efficiency here is what it should be. Supervisors are members of the union and their sympathies are frequently misplaced. Supervisors change week-

ly with the attendants and they, with the attendants, are confused and indifferent. As a staff man explains:

They take no interest in anything and the service is just as well off without them as to have them hanging around. The employees call them "Mail Carriers," for no one can see that their duties are anything more important than the distribution of the mail.

*Attendants.* Many superintendents immediately added to the attendant force in order to increase the ratio on duty.

When later the deficiency was obviously unavoidable the force was "cut to the bone."

Now the question arises as to the *proper* ratio of attendants on duty and it is of interest to see Illinois' place in the following table:

Day ratio set by English Commission (exclusive of dining-room attendants and night attendants) and in use in English and Scotch asylums .....	1 : 10
Day ratio on duty at 37 widely scattered American hospitals, outside of Illinois.....	1 : 12½
Illinois day ratio on duty 1 to 16. As there are two shifts, the comparable ratio of attendants on day duty for any one period is ½ to 1 to 16 or.....	1 : 32

The Illinois ratio is the lowest to be found.

But is not the loss of numbers remedied by longer service, hence better training?

#### *Changes.*

Sixty hospitals outside of Illinois (under two-shift system)..... 70% Per Year  
Illinois, 1916, record shows (three shift, high wage, much time off).. 70% Per Year

Thus nothing is gained here through the innovations.

The two tables together show reduced numbers and poor efficiency. *The ill effect of the two acting together is not to be under estimated.*

*Efficiency.* Theorists say "Nurses enjoying shorter hours, higher pay and equal work will naturally remain longer in the service and will perform high grade service while there." They do not stay longer (as shown above) and needless to say the superintendents and the medical staffs are the ones co-operating with the nursing force and are in position to judge of their efficiency. Replying to questions, not one of these has said the efficiency of the individual attendant improved under the new regime nor had there been a group improvement. I quote a few:

The attendant force of the old days was more stable, not nearly so migratory in disposition as at present. With this system there are some drawbacks inimical

2. About one-sixth of these are off duty every day. Requisitions to fill vacancies refused probably because of lack of funds.

to the best care of the patients. It also interferes with discipline. It was presumed that the new system would stimulate increased energy in the attendants, but this has failed to materialize. The small force embarrasses the management in getting the patients out for walks, to their meals and the other activities outside the wards. In the wards the constant tendency is to shift the blame of everything from one group to another so that it is impossible to place it. The better class of attendants are discouraged and the others are no good any way. The proper solution would mean huge appropriations to carry out.

Another writer says:

After being under the eight-hour system for two years, I prefer the twelve-hour shift. The employees render better service. Now it is, "The other fellow did it," or, "I don't know." With all attendants increased about one-half, we are not able to furnish them quarters to stay in. Therefore, about one-half room away from the institution, and this makes it very disagreeable for both the management and the employees. Some of the theoretical advantages are, the attendants have more time for recreation, so they do not become so tired at their work; hence they are supposed to render better service; but I do not think they do. Most of them had rather work twelve hours at ten dollars more per month.

An institution man of many years experience says:

This division of hours is so awkward of administration that there is no way of placing responsibility, and the attendants are with their patients so little that they know nothing about them, not even their names. The attendants change frequently, not only from shift to shift, but from ward to ward, and I would call to your attention the other matter, namely, the number of employees who do nothing but relieve those who have their weekly day off duty. It takes one of these employees to relieve every six attendants and domestics. In an institution having 225 day and night attendants, a force of 37 employees is required to do nothing but relief duty. Being in the same position each day, they render no service to the institution so far as caring for the patients is concerned. For this I estimate the expense in this one instance, at \$20,000 per year.

Others say:

Our expectations have not been realized. \* \*

Because of friction, there is great neglect. Many times treatments are neglected and medicines not given. \* \*

Married people come to work after doing a day's work outside and, of course, do nothing here. When there is family illness, they stay at home without proper notice. \* \*

We have too few on duty when the patients rise in the morning and go to bed at night, and too many at other times. \* \*

The shifts are jealous and try to push the work on to the other fellow, and as the others reciprocate in kind, no one does it. \* \*

Some people claim that the eight-hour schedule can be introduced and followed without deterioration of the work, with the same number as under the longer hours. Never was there a greater fallacy. \* \*

Taking care of these poor unfortunates, forsaken human beings should mean something more than merely watching them. \* \*

The attendants are changing all the time. There is no way to satisfy them. Everybody seems at loggerheads. It is impossible to get the patients properly cared for. \* \*

The union and the eight-hour day result in lack of respect for authority and general dissatisfaction among the employees. Much poorer service for patients. Old employees who are conscientious prefer the old system.<sup>3</sup>

A philosopher lost in the wilderness says:

Many people feel that the life and conduct of the employees when off duty is of no concern to the authorities of the institution. I certainly do not agree with persons of this opinion. I think it is one of our gravest and most important duties and this is especially true since the introduction of the eight-hour system and the present arrangement of hours. All this leisure time must be properly used. If it is not, the institution will feel it. But the evil consequences will not stop there, but will be felt in many different communities. It is an appalling sight to me to see large crowds of men and women going to the dining-room at noon and to think that the majority, and a very large majority, have done absolutely nothing all morning, and worse still, will do very little after they go on duty at two o'clock. What is more conducive to a worthless and good for nothing life than so much tree time. A few weeks ago I made a tour of inspection through the women's dormitory. It was between nine-thirty and ten o'clock in the morning. There were about thirty women in their rooms. Only one was occupied, the greater number were in bed, and if not in bed, they were lolling around doing nothing. Everyone of these strong young women should have been at work. What kind of women are they going to be if they are allowed to lead such lives? I think it is our duty, our imperative duty, to know how our people spend their free time. Not to watch them, not to be distrustful of them, but to help them in leading the best kind of a life.

*Axiom: The lowest numbers in the world for physicians, supervisors and attendant groups and the poor standing of the latter two, call forth this axiom: Whether there is to be humane "personal" care or "group" care; strictness or brutality, is dictated entirely by the ideals and numbers of the medical and nursing service. There is a positive relationship between a well-trained and proper numerical force of physicians, supervisors, nurses and attendants, on the*

3. I am told a "round robin" at one hospital, duly signed by over three-quarters of the employees, asked for a return of the two-shift system.



one hand and humane service on the other. Further comment seems unnecessary.

### TREATMENT.

This, from the patients' point of view, is the most important finding.

*Medical Work:* With the ratio of 1:280 it is impossible to do credit to the work. The staff members admit their work is routine work only. For instance, one man on an acute service admitting more than 300 patients per year has in addition, a chronic service of nearly 1,000 patients! At all times from 40 to 60 admissions await mental examination which must be made before treatment is started! This means a month in the hospital! A month's delay in being able to start that which may decide the difference between recovery and chronicity! Horrible to the patient and startling to the tax payers for such neglect may spell a lifetime of dependence to the one and thousands of dollars to the other.

*Laboratory Work:* The interest and efficiency in medical work is well shown by the number of autopsies performed. Forty per cent of deaths may be autopsied, but in Illinois the number is so small as to be negligible. In fact, a staff man told me the medical care was so poor in his hospital that not even routine urinalyses were made in the laboratory. Indeed, no laboratory work is possible except in two<sup>4</sup> institutions having special arrangements and facilities.

A staff man said to me in disgust, "I am walking all day, my service is so great and we all are only 'pill peddlers!' We have no time for anything else." Another staff man told me, "All we do is to wait for pay day." A physician in high standing assures me he knows of no staff man in the state who does not say that "conditions are rotten."

A member of the Massachusetts Board of Insanity said, "In a modern hospital a hospital service is a series of Laboratories" but as shown laboratories in service in Illinois are most conspicuous through their absence.

Dr. Adolph Meyer, the foremost alienist in America, said a hospital medical service to attend fully to its duty must include a "reaching out" policy "into the community and be responsible for the mental health of the community or district which it covers." Though ripe for this sort of work two years ago and more the other

plans were considered of greater importance and no medical move was made (if contemplated) and now the results of the policies that were inaugurated allow of none.

Says the English Royal Commission: "Insanity is a medical problem," but the medical service of Illinois has been so disrupted in every respect that I am assured the service has degenerated into something little above the County asylum basis.

*Nursing Treatment:* Reduced numbers and poor efficiency lead one to believe the nursing must be at a low ebb. This is found to be true, but what can one expect by way of skilled nursing from two attendants on an admission ward of 72 acute cases. Those needing most that skilled help are denied it in every hospital.

One hospital ward, 38 patients, 24 bedridden, all served on trays and most of the patients untidy. These patients are attended by two attendants on one shift and one attendant on each of the other two shifts. Imagine the result!

Untidy ward, 110 patients, soilers and wetters. These are cared for by three on one shift, two on the second shift and one on the night shift. At one time 60 of these had either pediculosis or ringworm and who can be surprised?

Finally, regarding one hospital let the following be quoted:

	1913- 1914	1915- 1916	Percent of increase
Population .....	1,700	1,950	14
Deaths .....	341	459	30
Escapes .....	33	161	500
Suicides .....	3	5	66⅔

The above are merely examples, but even if no more could be quoted, an investigation is demanded.

*Attendant Care:* A ratio of 1 to 32 throughout a hospital means that on some wards the ratio is from 1 to 50 or 1 to 60. The amount of personal care on any of the wards is nil. Vile treatment known as "Group Treatment" is a necessity. Attendants are so few as to be discouraged by the amount of work and call on the patients to do it, and from lack of proper supervision many accidents with fatal ending happen under these patient caretakers. Such every day affairs as walks, going to entertainments, are accomplished only with the greatest embarrassment to the management.

In some hospitals the attendants frankly say

4. One of these has closed since this was written.

that they refuse to be responsible for the care of their patients as they feel that their few numbers cannot watch them and care for them properly. The success of the attendant service measured by escapes is shown as follows:

Report of escapes for the year 1916:

	Escaped	Returned	Not Heard of
Chicago State Hospital....	371	284	87
Anna State Hospital.....	70	20	50
Elgin State Hospital....	145*	113	32
Peoria State Hospital....	144	117	27
Lincoln State Hospital...	224	184	40
Jacksonville State Hospital	76	61	15
Watertown State Hospital	31	9	22
Kankakee State Hospital	153*	80	73
Total .....	1214	868	346

(A Eugenics Note: Seven per cent. of the hospital population escaped and two per cent of the total actually disappeared.)

#### REPORT OF ESCAPES DURING THE YEAR

1913			
	Escaped	Returned	Not Heard of
Chicago State Hospital...	157	110	47
Anna State Hospital.....	31	11	20
Elgin State Hospital.....	60	49	11
Peoria State Hospital....	58	38	20
Lincoln State School....	35	35	..
Jacksonville State Hospital	8	6	2
Watertown State Hospital	12	2	10
Kankakee State Hospital	142	93	49
Total .....	503	344	159

Measured by suicides, the matter is not so clear. It is reported from one hospital that the number of suicides has doubled. From another hospital it is said there has been no increase in the number of suicides. I have no official figures at hand, but if the condition of affairs is to be judged by one experience, there will be found an increase in the number of suicides. A very suicidal man under my care was taken to a State hospital psychopathic ward where, on admission, nobody paid any attention to him; when protest was made to a nurse putting up trays, she replied, "There are just two of us on this ward and we have to serve all these with trays, and this new man will just have to take his chances with everyone else." A doctor in the service remarked, "There is no reason why there should not be an increase in the number of suicides for no one watches that class especially."

5. Not counted as escaped unless gone more than 48 hours. I have reason to believe that more than 300 escaped from each of these hospitals and from others in the same proportion.

#### INNOVATIONS IN MEDICAL CARE.

The extension of the use of *female attendants on male wards* has received considerable attention. After twenty years of experience with this plan the writer agrees no objection can be made to this *provided* due attention be made to two important considerations.

First, that the proper grade of female attendants is secured and this is not always an easy matter. Second, if the proper grade be secured, that their work be well supervised because of their inability to give competent care to those two places that are sources of trouble, namely, the hopper room and the bath room.

*Examples:* Recently a physician on making rounds found the hopper room in very bad condition and the female attendant on this male ward acknowledged she had not inspected this room within a week. I am assured it is quite impossible to force better service from the women on men's wards. An attempt was made in some places to force women attendants to bathe the men patients, and for some time they did so but when the patients were found to be in a deplorably dirty state with some hospitals the system was changed (in others not).

Then, too, the sexual element cannot be ignored in having females in male wards.

The *second innovation lies in the alleged non-use of restraint*. The Board of Administration, *General Orders No. 170*, gives the definition of restraint as follows:

*"Restraint is the use of all means, methods, or processes to control or hinder from action in any manner, the movements of a patient."*

Under this definition, 0.3 per cent of the State hospital population of 1914 were in restraint. It is acknowledged by all institution men that certain patients exist with whom it is necessary to limit activities, for instance an insane man who insisted on removing the splints from a broken leg and an insane woman who insisted on mutilating herself in a suicidal attempt.

The recent administration got around the name "restraint" by calling these means "therapeutic procedures" or "hydrotherapeutic measures."

Under this disguise, packs have come into common use. Packs consist in the close application of a cold wet sheet, covered in turn by tightly bound blankets. The arms are fastened



down tight by this means and the legs are bound together. *Movement of any of the limbs either separately or together is impossible.*

Kellogg and others recommend the wet pack as well as the neutral pack for the nervous.

If with the consent and co-operation of the patient, the matter is one thing, but if given to people who oppose them, who fight against their use, who require two or three attendants to put them in the pack (and this is the usual condition in hospitals) then another condition develops. When the matter is one of force, the patient has to be pinned in tightly with large safety pins or anchored down with tightly drawn cross sheets or both. This has been done in the Illinois service for about two years.

Is there a question that the pack is a "restraining apparatus"? If there remains a doubt, let me say these are used in Illinois as above described for as much as nine to fourteen hours out of twenty-four, day in and day out. Kellogg says a pack with therapeutic result starts a sweat, and if not, is to be discontinued, so these cases it is to be taken, are sweated nine to fourteen hours out of twenty-four. One patient told me she had been kept in a pack fourteen consecutive hours, and said in her opinion, packs were the vilest form of restraint. She ought to know, for she acknowledged that all sorts of other apparatus had been used on her in times gone by.

A male patient told me he had, on one occasion, to be put into a tub of cold water when he came out of his pack. A staff member said "some of them fail pretty fast" under pack treatments. Experienced physicians have seen pack cases in hot weather die of heat stroke. "Last night one man was restless and noisy in a pack for three hours and a hypodermic was finally necessary."

Can you imagine a more diabolical torture than that secured by nine hours (or more) in pack on a score of homicidal or suicidal cases on a hot summer day? Yet, in Illinois, it is a matter of pack or injury; pack or death; for there is no substitute allowed for packs.

NOTE: Number of packs in a period of two weeks this summer at five hospitals .....1,782

Let me quote from statements made by physicians: "If any one breaks a pane of glass we

order a pack. If any one raises a disturbance we order a pack. Ninety-nine packs out of a hundred take the place of other forms of restraint or of seclusion. Our medical acquaintances agree uniformly that packs are diabolical things to use, but what can we do? No other means of restraint is left at our command."

Again: "Packs are used so extensively because:

1. Only form of restraint permitted.
2. Easily applied to a large number with small number of employees.
3. Effective."

This writer continues, "Packs should be done away with except where there is distinct therapeutic indication because:

1. A torturing form of restraint.
2. Dangerous—Overheating not uncommon and lethal ending not at all unknown."

*Drug Restraint:* Popularly in this country and abroad the use of hypodermic sedatives is considered restrain, and as such is covered in the General Orders mentioned. It is found that this form of restraint is in general use in the hospitals notwithstanding the claim that there is no restraint of any kind in use in the State.

I learned just recently of one patient who, in the absence of other forms of restraint, has to be given three grains of morphine per day and has contracted the habit; and of another who, in the absence of other forms of restraint, was handled for a time with hypodermics until she committed suicide by ripping open her abdomen.

*Question:* Whether it is really judicious to abolish other means of mechanical restraint than packs is a question that should be very freely discussed by all interested in the insane. It is openly admitted that the number of accidents and injuries is vastly increased at the present time and this is due at least in part, to the use of packs to the exclusion of other means of restraint. Of the inhumanity of their use there can be no question.

#### INNOVATIONS OF CUSTODIAL CARE.

In addition to new methods of handling employees there were certain changes made in the method of caring for patients. One of these consisted in giving local paroles to a vastly increased

number of patients. So long as this can be done without danger to the individual or the community, no exception is to be taken to the practice. When these basic rules are violated, then some doubt is to be thrown on the wisdom of extending this privilege to a doubtful group of patients. In the latter class are those inclined to run away. The official records show that the number of escapes has doubled since this idea of "personal freedom" has been made to include the patients as well as the employees. On another page a table shows that more than 7 per cent of all the patients in the State hospitals ran away last year and that 2 per cent of the total population dropped out of sight.

A physician tells me these men all carry matches and smoke in the ward, surely a dangerous practice. They become independent when given paroles and they say to ask them to occupy themselves threatens their "personal liberty." Hence they refuse to work.

Many violate their paroles by going off the grounds to get drunk. "A general I. W. W. feeling pervades these paroled men."

The public press takes notice of crimes committed by patients while thus away from their institutions.\* One State hospital reports four or five illegitimate births at the institution and at least one murder due to this practice.

### UNIONS.

The presence of unions is mentioned to show one of the new factors introduced into the service and the ensuing complications with their bearing on the care of the patients.

The State Charities Commission is sufficiently aroused to object, 1, to dictation to and intimidation of the Superintendents; 2, to the union as opposed to the employment of patients in the trades about the hospitals; 3, to the influence by the union in attempting to dictate what treatment a sick man, sane or insane, should receive.

One officer writes:

I feel that there are higher things in life than big wages, short hours, and an easy position. In my mind, the hospital world and the industrial world are incomparable.

Another said:

"We have to handle human beings of a peculiar sort in a peculiar manner; not wood and stone, but human flesh and human comfort and happiness. We

\*As this is going to press an escaped woman murdered her baby and an escaped man had to be killed while resisting arrest at the hands of a posse.

need peculiar instruments and all the humanly minded should at least not obstruct us.

I venture to quote an opinion from outside:

There should be a sharp line drawn between public service and the industrial relations of private citizens. There is a special duty assumed by men and women who voluntarily enter public service. It is a duty superior to private interest and if any one is not willing to recognize this he should not be accepted in the service.

Collective action by government employees to enforce economic advantage is an equivalent to mutiny on shipboard or in the army.<sup>6</sup> The greater interest of the general public must overrule the private interest, otherwise government ceases to be free and responsible and becomes a haphazard affair which may be made subservient at any moment to a private interest at the cost of the public welfare. Affiliated with the Federation of Labor, all these unionized government employees will carry their government responsibilities into the midst of the industrial (nursing) struggle, where it has no business to be. Strikes to raise the pay or shorten the hours of workmen in the clothing trade or the coal mines or the steel trade might involve the government unions and precipitate a collapse of public machinery. The supremacy of government necessary to all ordered society would be lost and we should have a condition of affairs like that of Russia in her present chaos.

### CONDENSED FINDINGS.

Medical Ratio.....Lowest to be found.  
Supervisory Ratio.....Lowest to be found.  
Attendant Ratio.....Lowest to be found.  
Efficiency of all these grades.....Very low.  
Constructive or progressive tendencies....None.  
General care of patients.....Very poor.  
Per Capita Cost in Illinois.....Very high

### WHAT SHOULD HAVE RECEIVED ATTENTION.

Instead of fads and fancies, a comprehensive plan for the proper care of all dependents should have been developed.<sup>7</sup>

1 : 250 Insane, so Illinois has 24,000; under care 17,500  
1 : 300 Defective, so Illinois has 20,000; under care 2,500.

1 : 400 Epileptic, so Illinois has 15,000; under care none.

Total Insane, Defective, Epileptic, 59,000; under care, 20,000.

Needed two years ago (not all above demand institution care):

Buildings and maintenance for approximately 4,000 insane.

6. Collective action of attendants in asylums is far from unknown and in my experience is always carried out without regard to the welfare of the inmates.

7. Apparently were forgotten the development of improved medical service; extension of medical and scientific laboratory work; boarding out system; social service; state farms and agricultural colonies, as well as other items looking to constructive betterment. Even the buildings at Dixon and Alton have weathered for years awaiting arrival of the first patient.



Building and maintenance for approximately 5,000 defectives.

Buildings and maintenance for approximately 5,000 epileptics.

Buildings and maintenance for approximately 3,000 employees.

Buildings to correct unhygienic over-crowding in state institutions 5,000

Total beds needed then 22,000

Provision then under way for 2,000

Net beds needed for incapacitated taxpayers and wage earners when experiments on "Social Justice" inaugurated 20,000

Estimated cost \$20,000,000

Yet this problem remained untouched and it exists today.

#### SUMMARY.

Regarding Maintenance—

Increase (imposed by experiments) necessary for return of average grade service, annually .....\$ 1,360,000

To include 20,000 awaiting admission, double this. Regarding Building Program—

Imposed by experiments for needed new attendants .....\$ 2,000,000

Needed two years ago and now for over-crowding ..... 5,000,000

Needed two years ago and now for those seeking admission ..... 15,000,000

Note the added burden and the untouched building program.

#### CONCLUSION.

What can I say to make this paper constructive? Thus far, facts have been outlined and conclusions of a critical nature have been drawn.

On the constructive side, first let us grant the trend of the times is such that the three-shift plan will not likely be abolished entirely, though I believe this, with the other innovations may be modified in a definite manner without injustice to the attendants and yet with great benefit to the patients. To my mind, *it is imperative to thus modify the service.*

In the second place, immediate needs include more doctors, more supervisors and more attendants, but as the State hospitals are now running into a deficit, I am afraid the service must remain in the doldrums or under the influence of adverse hot winds for two years more.

*Then a fight for an increased per capita is a necessity.*

The service has had a terrible jolt and *nothing can save it except an increased per capita.* But just think of the effort and time necessary to undo the ill effects that have recently befallen the service. It is to be feared many years will pass ere the Legislature will increase the per capita to anything that is adequate to meet the situation.

#### RECOMMENDATION.

First step looking to a Constructive Program, A SURVEY.

We see what has happened to the insane; the feeble-minded and the epileptic also have suffered from the same cause.

This is a problem involving human suffering and is of such magnitude on this as well as the eugenic side that it must be approached in an appropriate manner. The task can be outlined in its total bearing only after competent study by experts.

This committee must have the widest possible powers for investigation. The scope of work within its field cannot be made too great. Its personnel must be of an approved type. Its findings and recommendations must be given earnest consideration.

Due publicity must follow and with public opinion duly fostered and established, the Governor and the Legislature must be petitioned to handle the financial end in an expeditious and ample manner.

This program cannot be given its initial impulse too soon.

#### SUMMARY.

Billings is authority that between 1904 and 1912 Illinois had made vast strides toward modern and adequate care of its dependent citizens. Much still remained to be done and especially in preparing for the future. The work had been half accomplished and there still remained as many more dependents to be cared for as were already under care and treatment.

Unhappily this fact was not grasped and the State authorities saw nothing more important at hand than to modify the methods of handling the employees. Already Illinois had been more fair than the other States of the Union, but the authorities proceeded to shorten their hours of labor and increase their pay. The final result of this has been that the State hospital situation of Illinois is the worst to be found in the country and what is more serious, the State has been embarked on a plan of expenditure that will subordinate the proper care of the patients for many years to come.

The constructive recommendation is that the method of handling the employees be severely modified to the benefit of the service, and secondly, that a competent *survey* be made by skilled

ment,<sup>†</sup> that the citizens of the State may understand the extent and gravity of the total program of caring for all dependents and that proper remedial measures be initiated at an early date.

Under methods and schemes recently thrown on the service, this will eventually involve annual expenditure of not less than ten millions of dollars and a program of building construction involving the expenditure of not much less than twenty-five millions of dollars.

## IS NITROUS OXIDE OXYGEN GAS IN LABOR DANGEROUS TO BABIES?\*

R. R. FERGUSON, M. D.  
CHICAGO

*Mr. President, Ladies and Gentlemen:*

Sixteen months ago it was my privilege to see my own son delivered by the use of nitrous oxide oxygen gas analgesia, administered by one of the best dental surgeons in the Country; one who uses gas analgesia in all his dental work, Dr. E. S. Barber of Chicago. Gas was used only during the second stage of labor which lasted perhaps some forty minutes. Ninety per cent nitrous oxide and ten per cent oxygen was used. This percentage was hardly sufficient to annihilate all pain.

Having delivered hundreds of babies, some under ether, some under chloroform, and some without any anesthetic, I was keen to note any differences which might be observed on my first gas case and especially so since it was my own son. These observations will be noted later.

I, therefore, began a detailed study of each individual baby delivered under gas analgesia and have reached some conclusions which seem to be at variance with the experience of many prominent men throughout the United States.

However, I was not content to confine my observations to my own few cases, about sixty in all, so I began collecting data from other men throughout the United States. This part of my work has covered a period of about six months, and in these months I have corresponded with many of the best and largest hospitals and with hundreds of the most experienced men in the

country. Their names will be familiar to you all as their views are given.

My observations have thus far covered approximately seven thousand cases and my complete paper which is to be read in New York City, on June 4 before the American Association of Anesthetists, will cover every phrase of the subject.

My paper tonight, however, will deal simply with my subject as announced in the *Bulletin*: "IS NITROUS OXIDE OXYGEN GAS IN LABOR DANGEROUS TO BABIES?"

In order that no prejudice may enter into our discussion permit me to state that there are two classes of men interested in this important subject: First: Those who honestly believe there is absolutely no danger to the mother or baby, neither immediate nor remote, through the use of nitrous oxide oxygen gas in labor, and from their experience it would seem to be so; in fact, it would seem that their experience should be that of every other man who uses gas in labor. This class seem to be in the great majority. On the other hand there are those who believe there are elements of great danger to the baby and their experience has taught them some important facts, which I wish to bring to your attention. This latter class seem to be in the minority. In order to place these two opposite views before you I shall first give you the ideas of those men whose experience has taught them there is no danger in the use of gas oxygen in labor to the baby, neither immediate or remote, and I shall begin with Dr. Carl H. Davis, of Chicago, who is one of the foremost users of gas in labor and has used it extensively at the Presbyterian Hospital in Chicago. To quote from his letter:

"There is no apparent effect on the baby. A critical study of all cases delivered in the maternity department of the Presbyterian Hospital during a period of six months shows that the babies of mothers treated with the analgesia lose less weight during the first week than did those of mothers not given the gas. There is no variation in fetal heart tones of over five per minute and then only once in a case where gas was used for ten hours. Less effect on babies than either chloroform or ether."

These observations are corroborated more or less by such men as Reed of Chicago, Barbara Hunt of Bangor, Me., Allen of Brooklyn, Dob-

<sup>†</sup>Preferably one or more above criticism and from outside the state.

\*Read before the Chicago Medical Society, April 18, 1917.



bin and Bergland of Baltimore, Stone of Beverly, Mass., Allen of Colorado Springs, Meyer of Louisville, Hubbard of Boston, Sullivan of Lakeland, Fla., Mercy Hospital, Chicago, Clark of Walter, Dakota.

Dr. Darling of Milwaukee, observed the following: "The first cry is earlier and lustier and the general condition is better than other babies."

Dr. Morrison, Springfield, Ill.: "No appreciable effect on baby."

Dr. J. B. DeLee, Chicago: "No deleterious effect on baby for I give ether at the end of second stage."

Henderson, Louisville: "No danger to baby if mother does not become cyanotic." This expression I have noted in many of my letters and please note it carefully as I hope to be able to refute the same later.

Sweet, Fresno, Cal.: "No ill effect on baby before or after delivery."

Gottett, Louisville: "Absolutely no ill effect if anesthetist knows his business."

R. W. Holmes, Chicago: "No effect on baby."

McKesson and Dice of Toledo: "No effect on the baby."

Brant, Newell, Kellogg and Irving, Boston: "Avoid cyanosis in mother and there will be no ill effect on baby."

Hamilton Long, Louisville: "There is no danger to the child if the gas is in the hands of one expert in its use. Avoid cyanosis in the mother to avoid trouble in the baby."

Louis Frank, Louisville: "We have had no ill effects either on mother or babe immediate or remote."

W. H. Browne, Detroit: "Cannot notice any untoward effect upon the baby."

Arthur B. Coon, Little Rock, Arkansas: "No ill effect on baby."

Rothenberg, Cincinnati: "Even after prolonged labor, no ill effect noticed."

Hoag, San Francisco: "As far as I have been able to see, there is no deleterious effect on the baby."

From the foregoing expressions of faith in the absolute safety of nitrous oxide gas in labor, and coming from so many prominent and experienced men as have been quoted, it would seem that there is no room for argument. The medical literature is painfully silent regarding any untoward or dangerous effect on the baby, and until

I took up the use of gas in labor, and studied its effects on the baby, and later proceeded to investigate the experiences of hundreds of men throughout this country who are using this method, I must admit that I too, believed in the absolute safety of this gas, both to mother and baby, and expected it to be used unreservedly by the medical profession throughout the country. But such is not the case.

And I am sure you will all understand how difficult it is to get men to admit any serious happenings in their experience. But when hundreds of men are reached by personal letters, one is certain to obtain the true experiences of some of them. This does not mean that the experiences above enumerated are not the true ones of those who were so kind as to answer my questions. But such personal letters as I have written have been instrumental in bringing out cases never reported before, and unless reported in this way would never be heard of. And if my paper will establish the fact that there are always elements of danger to the baby in the use of nitrous oxide oxygen gas whether administered by an expert or a novice, and this danger is not past until twenty-four to forty-eight hours after the birth of the child: And furthermore, if it will establish a method whereby such danger will be reduced to a minimum, then my time will not have been spent in vain.

Many of the men quoted above have never seen in their practice any untoward or dangerous effects on the baby, while others have expressed themselves as believing certain conditions might cause deleterious effects. There are still others who have actually seen these dangers either in their own or someone else's practice.

To quote further from some of my letters:

Dr. J. B. DeLee, Chicago: "No deleterious effect on the baby in my experience for I give ether at end of second stage. Do not use gas longer than three hours as there is great danger of hemolysis."

Tuly, Louisville: "I have only seen one case in which I could attribute asphyxia of the baby to the use of gas, that one occurring recently in a multipara with second stage prolonged over an hour; gas was given fifty-five minutes; baby cyanosed—but breathed and cried promptly and all blueness gone in ten minutes after birth."

Bacon, Chicago: "When gas is given for some

time in a high degree of concentration before the birth of the child I believe that the baby is more apt to be asphyxiated than where ether is given. Occasionally I have to work some time in order to resuscitate the child, but never lost one."

Breitstein, San Francisco: "When 95 per cent nitrous oxide is being given the fetal heart tones are stronger and 6 per cent were asphyxiated but all resuscitated.

Darling, Milwaukee: "Does not advocate the general use of gas unless familiar with its use."

Palmer Findley, Omaha: "I regard gas analgesia more dangerous than ether, and less satisfactory from the standpoint of expense and efficiency. More cyanosis in the baby; about 25 per cent."

Brant, Boston: "We make a strong point about avoiding too deep anesthesia with cyanosis, for we believe the dangers, theoretically, and clinically proven, such as increased blood pressure, decreased coagulating power of the blood, etc., are present if at all, only when "carbonization" of the blood has taken place. As a result we are opposed to the use of oxygen and ether adding machines as offering temptation to too deep degrees of anesthesia."

Hewett, Chicago: "Less asphyxia if oxygen is given at once before cord is tied."

Darling, Milwaukee: "Oxygen to mother resuscitates baby quickly."

Clapp, South Bend: "While the cord is still pulsating give oxygen to mother and baby becomes pink at once."

Hoag, San Francisco: "Immediately following delivery, I have always switched on pure oxygen, so that most of the babies are hyper-oxygenated before the cord is tied."

Skeel, Cleveland, in *J. AMA*, March 11, 1916):

I wish to enter a vigorous protest against the advice at present being so freely given that any one may use gas in labor cases with perfect safety. Gas is a powerful therapeutic agent with infinite possibilities for harm at the hands of incompetent or careless users. The statement has been made and is, I believe accepted, that gas in the hands of an expert is a safe anesthetic, but the most dangerous anesthetic if given by a novice. Even in analgesia some knowledge and experience are necessary to secure both safety and satisfaction from its use. Moreover, the temptation to follow gas analgesia labor with gas anesthesia for repair is so obvious that I would earnestly urge all those expecting to adopt this method to spend sufficient time in special study of the agents

he is to use, so that he can direct its administration. Free use of gas by the inexperienced will surely lead to tragedies.

In looking over these last quotations from so many prominent men, is it not true that we must look for some of these so-called tragedies? It is almost like a forecast of what will surely occur sooner or later. To quote from another letter: A physician, whose letter I hold in my hands:

I am glad to give you any information possible in regard to the death of my baby, and will answer your questions as follows:

1. What length of time was gas oxygen used?

Nitrous oxide oxygen analgesia was given about four hours.

2. Did mother show cyanosis at any time.

At no time did the mother become cyanotic; in fact, she did not lose consciousness at any time.

3. Was any other anesthetic used?

Small amount of chloroform was used for only a short time during delivery since gas did not seem to control the pains.

4. Was an autopsy held and its findings?

The autopsy on the baby was performed by Dr. Rawlston of Presbyterian Hospital, and absolutely no cause for death could be found.

5. Was pituitrin given at any stage of labor?

Pituitrin was given to mother but the consultant on the case could see no reason for believing the death was caused by this drug?

The consultant's letter read as follows:

"This baby took sick about twenty-four hours after birth with convulsions. These convulsions were recurring and the child was a picture of acidosis. Acetone odor to breath, red lips, slow pulse, respiration disturbed, but not of Cheyne-Stokes type. Pulse became slower and baby died in less than forty-eight hours after birth."

This is one of the four cases I know of which has taken the same course, in all of them gas was given for several hours more or less continuously before delivery. No pituitrin was given in these cases to my knowledge with the exception of the first case.

In studying the sixty cases in my own practice where the gas oxygen was administered by my own trained nurse, I have reached the following conclusions:

1. That more than twenty per cent of babies delivered by gas analgesia show a slight crowing inspiration immediately after birth which may last for twenty-four to forty-eight hours. This



is an entirely different condition from that encountered when mucus has been drawn into the larynx. It is more like a slight paralysis of the epiglottis with a resultant snoring sound.

2. That this condition of a crowing inspiration is very much exaggerated where rebreathing is used to any great extent.

3. That this condition of crowing inspiration is never present for more than a few breaths if the mother is given plenty of oxygen while the cord is still pulsating, but that it may last for hours if oxygen is not given.

Unusual muscular twitching lasting for about twenty-four hours, but not seen if oxygen is used freely for first twelve hours after birth.

And from my study of the seven thousand cases here reported, with my own cases included, I have reached the following conclusions:

1. That rebreathing is extremely dangerous to the baby and has no place in obstetrics.

2. That air and gas are less dangerous than rebreathing; but slightly more dangerous than when oxygen is used and not as efficient as gas oxygen.

3. That nitrous oxide oxygen gas in their proper percentages for each individual case, this to be determined at the bedside, is a most wonderful help to the mother, and may even annihilate all labor pain; but that it is impossible to rule out all danger to the baby even though the mother may show no cyanosis.

4. That nitrous oxide oxygen gas when used longer than three hours becomes dangerous to the baby by reason of the hemolysis which occurs in the mother's blood. This may also occur in the baby's blood.

5. That high blood pressure in the mother with pre-eclamptic toxemia is a contraindication to the use of gas oxygen and should never be used; it is not only dangerous to the mother, but also to the baby.

6. That it is never safe to use gas where the mother is suffering from hyperthyroidism.

7. That every baby showing a crowing inspiration at birth, or where the mother during labor has complained of a marked dryness of the throat while taking nitrous oxide oxygen gas, should be allowed to absorb all oxygen possible from the mother before the cord is tied, the mother receiving pure oxygen until cord stops pulsating.

8. That the babies are safe for three hours of a gas labor providing mother is never allowed to become cyanosed and nitrous oxide is not used above ninety per cent, the other ten per cent being oxygen, not air.

9. That when gas is used longer than three hours, there is great danger of a condition developing in the baby simulating the late deaths from chloroform or ether narcosis; and perhaps identical with the condition we call acedosis.

10.—That when gas is used in a high degree of concentration for longer than three hours, the baby should receive not only all the oxygen possible before the cord is tied, but it should be further reinforced by giving pure oxygen more or less continuously for from twenty-four to forty-eight hours after birth. This should be done as a routine in order to avoid a condition simulating the cases of postoperative narcosis from ether and chloroform and which, for want of a better term I have called acidosis.

11.—That the expression "carbonization of the blood" used by so many men to describe a theoretical condition in the baby, is a misnomer and means absolutely nothing. My authority for this statement is, Prof. Carlson, of the University of Chicago, and should be supplanted by an expression which would better describe the true state of the blood. And since neither carbon dioxide nor nitrous oxide in any way combines with the hemoglobin in the blood, but only starve the body cells of oxygen and thereby cause a retention of the acid products of metabolism: might not this condition in the baby or even in the mother be properly called nitrous oxide acidosis?

---

## THE PHYSICIAN AND PUBLIC HEALTH.\*

WILLIAM E. PARK, M. D.,  
ROCKFORD, ILL.

Herodotus, the father of history, in his book on the customs and manners of ancient Egypt, clearly points out that the public health was the basis upon which that old civilization of the Nile country founded its religion. The well known maxim, that "Cleanliness is next to godliness," was put into practical daily use by the Egyptians, who made the subject of cleanliness, and the pub-

---

\*Read at the Sixty-seventh Annual Meeting of the Illinois State Medical Society, May 9, 1917.

lic health, the central thought of their religion. To be unclean, in their opinion, was to be ungodly, and the penalty of death was only too frequently inflicted upon those who, by carelessness, neglect and disregard of the regulations concerning the disposal of refuse, garbage and any other such matter which might become a source of menace to the communal health, violated the law of that day.

While in the ancient Egyptian civilization there were many so-called physicians, each specializing in a particular malady, yet we are clearly told by the classic writers that the duty of enforcing observation of personal and public cleanliness devolved upon the priesthood. Medical science, then in its infancy, with many great elementary discoveries yet to be made, was groping in the darkness, a mere creature of superstition. Through the long centuries succeeding, exact knowledge has been slowly won as the torch of science has shed its crystal-clear light in the night of ignorance and fear.

In connection with the public health, and speaking now from the standpoint of a physician who has given a number of years close attention to public health work, it seems to me that the medical profession groups itself unconsciously into three classes of physicians. These are as follows:

First. The serious minded physician, unselfishly protecting the public at all times by promptly isolating and interesting himself in an early diagnosis. He reports immediately to the Health Department any infectious or contagious disease, always taking a firm stand with the family and explaining in detail such steps necessary for public health.

Second. The physician and surgeon who is intentionally good but by reason of his deep study in some particular branch of medicine or surgery is inclined to disregard the importance of isolation and early diagnosis of contagious diseases.

Third. The physician who is careless and willfully neglectful, both in diagnosing correctly and in reporting promptly. This physician is seldom found at the meetings of medical societies or conferences and is unprogressive. He does not believe in study after he has received his sheep-skin and hung out his shingle.

The first and foremost problem, it seems to me, is to weld the three classes of physicians into one

great body working whole heartedly and in a broad spirit of cooperation, and for the one result, public health. Physicians of the first class, who have always done their duty to society, can be persuaded and influenced to arouse the interest of those whom I have designated as class two, that is the intentionally good physician whose mind is upon private research. For the recalcitrant members of the third class I am convinced that we must bring the strong arm of the law to bear, if they will not yield otherwise to common sense in protecting human life. For the physician who is so unmindful of the responsibilities which society has reposed in him, that he flatly neglects or viciously refuses to report contagion, deserves neither our sympathy nor respect.

Let me remind physicians that tuberculosis is one of the reportable diseases and unless we have knowledge of it we can not have control. Open tubercular cases are constantly infecting those susceptible to disease. Of course, sanitariums protect the public to a certain degree, but public sentiment is not yet universal about the sanatorium and all communities are not protected by sanatoria, and those that are, are protected in only slight degree; for there is no compulsion as to isolation as there is even in a minor quarantined disease such as chicken-pox. The advanced case of tuberculosis is urged to go to the sanitarium, but the matter is entirely optional with the patient, and if he does not wish to go he remains home and infects one person after another in his family and in his zone of contact. So that I will venture to say that sanatoria and doctors thus far are only trifling with the disease, they are only scratching the surface and can accomplish no big result until more drastic laws and measures are adopted to protect the healthy person from becoming infected.

I strongly believe that every moderately and far advanced cases of tuberculosis should be colonized, not at will but by compulsion. As the power to stamp out tuberculosis rests so largely with the medical profession, physicians can not shirk or dodge their duty in aiding health officials to eradicate the disease.

Acknowledging that isolation is necessary and should be compulsory, it is our duty to make such colonization of tuberculars one of our studies. We must take the curse from it. Isolation must not seem so much like penal servitude. So far



as it is possible, home conditions should be duplicated in sanatoria. Amusement, recreation, opportunity for study are highly to be advised. Nevertheless, strict isolation should be the watchword, and there must be no visiting back and forth; nor should patients expect to be permitted to wander about the community after they have been enrolled at the institution. Physicians should not leave the study of sanatoria exclusively to the architects, but whenever possible should visit the places and acquaint themselves with the methods of sanatorium treatment. Here is a field of interesting observation and study for the alert medical mind, and the physician who so employs some of his time can not fail to become an ardent enthusiast in promoting public health.

As health depends upon fresh air, sunlight, nourishing diet, sensible exercise, the elimination of dissipation and gluttony and personal uncleanness, the physician can aid in reducing the death rate if he will preach the gospel of sensible living. These are the truths of human wisdom, handed down to us after centuries of experience, to obey the mandates of time means health, happiness and long life.

#### DISCUSSION.

Miss Van Blarcom related a recent experience that impressed on her mind very forcibly the importance of segregation. Living in a hotel on the south side in Chicago she noticed that the maid taking care of her room was in the advanced stages of tuberculosis. She was very emaciated and complained of a good deal of weakness, and she had a very persistent cough and free expectoration and apparently had an afternoon temperature.

After discussing the case with the house physician and the manager of the hotel the manager suggested that the maid be examined to find out whether or not she was in an advanced stage, and she refused. As there was nothing that the hotel people could do, the maid simply left and went as a chambermaid in a hotel a few blocks down the street where she is now, and if there is any danger in tubercular patients coughing with their mouths wide open and spreading this spray through the carpets and bedding, that woman is a menace to the community and there is no way of doing anything with her in Chicago.

Dr Pettit thought the suggestion that Dr. Park makes are the ideal but it is a long ways to the ideal under present conditions. The first thing is to educate the public to the necessity of reporting tuberculous cases; that tuberculosis is a contagious disease, and how and under what conditions.

It is not possible or practicable, at least for many years to come, to take care of all these patients in institutions, and it may never be necessary. Sanatoria for the treatment of tuberculosis must be largely educational institutions and every community should have an institution of its own.

The influences that go out from these institutions if they are well conducted will help more largely to educate the public and solve these problems than we can by any drastic legislation.

Whenever the profession recognizes its duty and that it will be punished if it doesn't perform its duty in the reporting of tubercular patients as much so as they now are in the more acute infections, then we will have taken the first and most important step.

Not every patient needs to be segregated. If a patient is intelligent and will cooperate with the health authorities in the prevention of the spread of the infection, they don't need to be segregated. But many do.

He is not so optimistic as to believe that tuberculosis can be obliterated in the course of a few years. If we do it in a generation we will do well. Then let us go about it in a business-like way, commence and do the things that we can and let our rule be that in all that we do we do the possible good instead of the impossible best.

Dr. Holmes spoke of the hospitals as a part of the educational system of the country, and thought it the duty of the hospital to educate the physician to educate the patient, and to educate the friends of the patient, especially in regard to tuberculosis and in regard to the treatment of mental diseases. He advocated direct and immediate connection between the hospital and the educational affairs of the state; the State University to reach out not only to every high school and every village school but to every activity of the state where the good of the community is concerned, and that is especially so in regard to these two conditions—tuberculosis and the diseases that are looked upon as mental diseases.

Thus the county should have its institution confined to the treatment of the very acute sick and to the education of those that are chronically sick and the education of their families.

Dr. Park (closing discussion): The old story of a lady working in a hotel is one that is universal. Nearly every person knows of such conditions, and at the present time to drive them out of that place, only to go somewhere else, it doesn't make any difference which hotel they are in.

At the present time it seems as though the physicians have got to give the subject a little more seriousness and more cooperation. The doctor who makes an early diagnosis of incipient tuberculosis is likely to become the object of criticism by the family but that doesn't correct it and the physician cannot consider his own personal interests in the matter. It is purely a question of public health and his duty towards the community to report it.

## PRACTICAL METHODS OF SEWAGE DISPOSAL.\*

EDWARD BARTOW,  
URBANA, ILL.

A method of sewage disposal that would be suitable for one community might not be at all suitable for another. Each community has a problem of its own, which must be solved with the help of competent experts. Without a knowledge of specific conditions, only generalizations can be made.

For cities located on or near large bodies of flowing water disposal by dilution is possible. Cities along the Mississippi river may use this method.

When there is not sufficient diluting water, some method of treatment, giving varying degrees of purification, must be used. Cities on the smaller rivers and on Lake Michigan must use some method of treatment.

Large cities may use a process where the cost of construction is low but where constant supervision is required and hence the cost of supervision and maintenance will be greater. A small city will make a greater proportionate expenditure for the construction of the plant in order that it may need little or no supervision. Continuous supervision and maintenance of a small plant by experts would be relatively costly for the small city.

During a trip with the Commissioners of Decatur, Ill., methods in use in several American cities were observed. The observations made and the conclusions formed may be interesting and useful to others.

*Treatment With Lime.*—An experimental sewage treatment plant was operated at Decatur. A fairly satisfactory effluent having been obtained by the electrolytic-lime process, and an equally good effluent having been obtained with lime alone during a short period when the electricity was shut off from the plant, it was thought possible that chemical treatment as used at Canton, O.; Brooklyn, N. Y.; Worcester, Mass., or Providence, R. I., might be suitable for adoption at Decatur.

Canton abandoned the lime treatment about a year ago and is now operating a new plant consisting of 6 tanks and 16 contact beds covering about 10 acres.

At Brooklyn lime is used in the treatment of sewage at the 26th-Ward pumping station. Sludge is spread over the low meadow land, but plans are being made to abandon this plant and to substitute Imhoff tanks and sprinkling filters.

At Providence the sewage, after treatment with lime or with calcium hypochlorite, is settled in tanks. After settling it is stored and the supernatant liquid discharged with the ebbing tide. The effluent was only fair in quality. The cost of treatment by lime or hypochlorite averaged \$3.59 per 1,000,000 gallons. The disposal of sludge was a difficult and expensive matter. It was first pumped to storage reservoirs and flowed by gravity to forcing receivers from which it was forced under pressure of 60 pounds per square inch through large filter presses. The dewatered sludge was finally transported by cars to scows and carried 14 miles down the bay. The cost of sludge disposal in 1915 was \$3.01 per ton of dry solids. The superintendent, Mr. Bugby, stated that he had thought the Providence plant, in service since 1901, would be the last of its kind. Experiments with activated sludge were being tried but the experiments had not proceeded far enough to give conclusive results.

At Worcester, Mass., during 1915 not quite two-thirds of the sewage was treated chemically. The remainder, the strongest part, was treated in tanks and on sand beds. The sewage, after treatment with lime and thorough mixing, passed into 6 roughing tanks and afterwards into 10 finishing basins. The sludge is drained by gravity to a sludge well and then pumped into 2 storage basins from which it is forced through presses. The sludge presses did not have sufficient capacity to press all of the sludge and part of it was disposed of on drying beds. After filter pressing the dewatered sludge was carried on cars by trolley motor to a sludge dump from which a considerable portion is removed by farmers each winter. The cost of chemical precipitation was \$5.29 per million gallons. The cost of sludge pressing was \$4.93 per million gallons. During 1914 experiments were made with Imhoff tanks and sprinkling filters with a view to their adoption either in enlarging the plant or in replacing chemical precipitation and sand filtration. The Worcester plant has been in operation since 1890.

The most difficult part of the operation of the lime-treatment plants was sludge disposal. It is

\*Read before the Public Health Section, Illinois State Medical Society, May 9, 1917.



an expense because the fertilizer value is not sufficient to accord any income from the sludge. Constant supervision is required, therefore a small community could not consider lime at all.

*Treatment By Screening.*—Reinsch-Wurl screens were seen in operation at the 26th-Ward Station at Brooklyn. At the time of the visit, Saturday afternoon, the sewage was very weak and only a very small amount of suspended matter was being removed. The effluent from the screens after passing sprinkling filters was stable. Reinsch-Wurl screens were being installed at Rochester to remove the coarser suspended matter before the sewage entered tanks. Each 12-foot screen cost \$13,000 in place. At one station in Cleveland, Reinsch-Wurl screens were in use but the proportion of suspended matter removed was slight. Screening alone is suitable only with ample dilution. It might be used to remove suspended matter before using some form of tank treatment.

*Treatment in Tanks.*—Septic tanks and Imhoff tanks are in use but septic tanks are being abandoned for the more modern Imhoff tanks. At Plainfield, N. J., the old plant containing septic tanks has been abandoned. The new plant contains Imhoff tanks preliminary to sprinkling filters. At Morristown, N. J., septic tanks are still in use before treatment on contact beds, but this type is no longer to be recommended. Imhoff tanks are being built to replace septic tanks at Columbus, O. The effluent will pass to sprinkling filters. At Chatham, N. J., Imhoff tanks were used for preliminary treatment before contact beds. The effluent was not stable and could not be discharged into a small stream without further treatment. The sludge from the tanks was being dried satisfactorily on sludge beds. At Fitchburg, Mass., five Imhoff tanks have been in use about two years. The operation is satisfactory in preparing the sewage for treatment on sprinkling filters. At Rochester, N. Y., the Brighton plant includes Imhoff tanks which furnish a satisfactory effluent for disposal on the sprinkling filters. This plant with the plants at Fitchburg, Mass., and Plainfield, N. J., are good illustrations of the best modern sewage disposal practice. The main disposal plant at Rochester consists of 10 Imhoff tanks and without further treatment the effluent will be discharged into 50 feet

of water 7,000 feet out in Lake Ontario where sufficient dilution should be obtained.

Tanks alone do not furnish a stable effluent and additional treatment by dilution or by secondary treatment is required before discharge into streams that become practically dry during a considerable portion of the year.

*Contact Beds.*—Contact beds were seen at Chatham, Morristown, and at the old plant at Plainfield, N. J. Contact beds are valuable where it is necessary to dispose of sewage entirely without odors. The sewage does not come to the surface of the bed and no odors are noticeable. However, the capacity of the contact beds is only about one-half that of sprinkling filters, and when plants can be constructed in a locality where slight odors are unobjectionable sprinkling filters are preferred.

*Sprinkling or Trickling Filters.*—Sprinkling or trickling filters have a capacity about twice as great as contact beds and furnish an effluent as satisfactory. Changes in the plant at Columbus, Ohio, where sprinkling filters followed septic tanks, were not entirely completed. It is expected that when the new Imhoff tanks are completed, satisfactory results will be obtained.

The new plant at Plainfield, N. J., is not yet in operation, but it is expected that it will give satisfactory results with the domestic sewage. The effluent from sprinkling filters at Fitchburg, Mass., after passing through a secondary settling tank is uniformly stable.

With secondary settling tanks the Brighton plant at Rochester furnishes a very clear stable effluent.

An experimental plant at a tannery at Norwood, Mass., has shown that sprinkling filters following Imhoff tanks would take care of tannery wastes at a rate of 500,000 gallons per acre per day.

The Imhoff tanks and sprinkling filters followed by secondary sedimentation would be suitable where little or no water to dilute the effluent is available for any city of sufficient size to justify continuous supervision of the plant.

*Sand Filters.*—Very satisfactory effluents can be obtained from sand filters. Sand filters were seen at Chatham, N. J., following Imhoff tanks and contact beds; at Morristown, N. J., following septic tanks and contact beds; at Worcester, Mass., following settling tanks. They are also

used at Walpole, Mass., for the treatment of part of the waste from a paper mill and at Norwood, Mass., for part of the waste from a tannery. Owing to the large area that is required to treat the domestic sewage of the larger cities and owing to the absence of sand deposits in the neighborhood, treatment of sewage on sand beds is often impracticable. For small cities such treatment requires least supervision and may be found suitable.

*Activated Sludge.*—At Brooklyn experiments with activated sludge have given promising results. The process will be studied with a view to its possible adoption at Coney Island and Rockaway.

At Providence, in an experimental plant, it is proposed to determine whether it would be practicable to replace the chemical precipitation process by the activated sludge process. It is thought that the present chemical tanks could be modified into activated sludge tanks if the process proves economical.

At Norwood, Mass., preliminary experiments with tannery waste give sufficient promise to warrant a continuance of the experiments. Either activated sludge or Imhoff tanks with sprinkling filters will be adopted for a new disposal plant.

At Cleveland, 500,000 gallons of sewage is being treated daily by the activated sludge process in a tank only 20 feet by 60 feet by 14 feet deep. No attempt is made to obtain a perfectly stable effluent. Owing to the dilution in Lake Erie an effluent which is stable for two days is considered satisfactory. The cost of air for the treatment at Cleveland was \$3.75 per million gallons with air at 75 cents per K. W. H.

The problem of disposal of surplus sludge from the activated sludge process has not yet been satisfactorily solved. Experimental work on sludge disposal is being carried out at Brooklyn, Chicago, Cleveland, Milwaukee, and at the University of Illinois and more definite information should be at hand at an early date.

If power can be obtained for less than 1 cent per K. W. H. and the sludge can be satisfactorily dewatered it would seem as if the activated sludge process might be considered for the disposal of sewage from cities having more than 20,000 population. It is especially suited to concentrated sewages like the packing house wastes of Chicago, for the disposal of which a committee has recommended the process.

## HYGIENE OF PREGNANCY.\*

EFFA V. DAVIS, M. D.,

CHICAGO.

The farmer who chooses good soil and sows good seed with the proper elimination of weeds, expects, barring accidents of weather, to harvest a good crop. He knows he must take proper care not to exhaust the soil or Mother Earth will not again produce the same good returns.

Universities in every state almost are being equipped to teach him the best manner of getting these results. In the harvest of the human crop not enough study or instruction is being undertaken—there is far too much loss in body, energy and life, because we have not yet reached the point where we are willing to soberly plan for a superior human harvest.

The average American woman, well educated along many lines—possibly college bred—lacks general knowledge of the hygiene of pregnancy to a deplorable degree. Boards of health are beginning to print instructions on child welfare to save the infant mortality, but so far a small and imperfect amount of instruction is being given women to guide them properly through pregnancy—the beginning and foundation work of child welfare and a better race.

An effort has been made by the social welfare workers to protect women factory workers, laws being urged to prevent pregnant women from working outside their homes in the last six weeks or two months of their pregnancies,—but little is done to direct the diet and exercise and other habits of these women after they are dismissed from the factory.

By far the greatest number of our American mothers are not factory workers, and judging from the experience I have had and the statistics obtainable from the works of others, a campaign of instruction on the simple rules of right living applied to pregnancy would lift a great weight of risk and dread from many child-bearing women.

The need for anesthetics, twilight sleep, instrumental delivery, gynecological repair operations, and invalidism due to motherhood would in a few generations disappear almost to the vanishing point if some of the facts which are known to the obstetrical observer were made popular

\*Read before the Section on Public Health and Hygiene at the Sixty-seventh Annual Meeting of the Illinois State Medical Society, at Bloomington, May 9, 1917.



knowledge by published leaflets and public lectures.

One of the most common errors appearing in my case records is the over-sized child. All infants weighing over seven and one-half pounds at birth I count as such. The average woman suffers in many ways from carrying a child over seven and one-half pounds. The abdominal walls are over-stretched, as well as the uterus itself; the birth canal is distorted and the perineal floor is damaged often more than a few stitches can ever repair. The greater the growth of the child the greater the damage and the more likely are we to be compelled to end the delivery with an anesthetic and forceps. I have seen mothers who have given birth to eight, nine and ten pound infants who were shapeless weaklings themselves after the third child, unfit to act as vigorous mothers to their little family, and even after all the skillful revamping of the clever gynecological surgeon, remain feeble, constipated and breathless individuals unable to comfortably walk a mile or do a proper active day's work.

With a restriction of diet and a balanced ration made to conform to the muscular activity of the patient while she was carrying her three babies, such an over-growth would not have occurred and the abdomen and uterus would, in normally constituted women, have been left after delivery in a wholesome resilient condition, keeping the abdominal and pelvic organs in the normal relations. Such a patient, if her children were born at least two and one-half years apart, should be a stronger and more vigorous woman after than before her pregnancies. I have seen such women often and feel sure there are a great number among our American population. Such mothers have no great dread of childbirth and become the greatest asset of a race when clean blood and temperate habits are possessed alike by them and their children's fathers.

A study of my last 200 cases delivered both in and out of hospital service is interesting on the "over-weight" subject. These cases are taken just as they have occurred and are not selected. In all patients consulting me early I have given as much instruction as possible, and when cases have placed themselves under my care in the hospital a pretty strict control of habits has been established, sometimes for six, eight or ten weeks preceding delivery. Cases waiting confinement

in their own homes are often unmanageable and too fixed in their habits to be benefited by medical advice, when that advice is not backed up by public belief and general knowledge. Our country has been a land of plenty and the 200 cases reported here come from the middle and upper class women mostly, but even those who came from poor homes have not been over-worked or under-fed.

In the analysis I find 98 mothers, or 49 per cent., bearing infants with a birth weight between six and seven and one-half pounds, or average birth weight; 25, or 12.5 per cent., with birth weights below six pounds, or under weight; 77, or 33.20 per cent., with birth weights over seven and one-half pounds, or over weight.

Of the under weights,

15 were born prematurely, mothers showing toxic symptoms.

2 were syphilitic.

8 were at term but born of mothers of poor constitution, frail and physically defective types.

Of the average weights,

8 were born between two and three weeks premature with weights at six pounds or slightly over that mark. Mothers mildly toxic.

10 were born of rather young mothers, from fourteen to seventeen years. These cases were not extremely active, but a close supervision was given to their diet—most of them being under hospital supervision for some weeks.

80 were active, sensible women, often doing much general housework in their own homes, or at the hospital. Willing and reasonable in the quantity and quality of food selected, possessed of moderation by habit, and easily controlled. These infants were markedly normal in their behavior—digesting their mother's milk well and gaining steadily in weight after the first physiological loss.

Of the over-weights,

77, the largest portion, 90 per cent., were cases confined in their own homes, or coming to the hospital during the last two weeks of pregnancy and either not under my care until near delivery or heedless of advice when given. Not a few were multipara with old, neglected lacerations of the pelvic

floor or sagging abdomen from previous pregnancies, which made active work or exercise difficult.

Out of the 77 cases, 19 babies were over nine pounds, the largest weighing fifteen pounds, born to a young Polish woman herself but twenty years of age, wife of a butcher and small grocer. The next two over-sized babies, one of eleven pounds and one of ten pounds fifteen ounces, were born to a woman who lived in some poverty but did but little work and ate heartily throughout her pregnancies, which were but eighteen months apart. She lost her first born, which she said weighed twelve pounds. It was stillborn owing to breech presentation and difficult extraction.

Forceps were applied in six instances and version and extraction in four due to malpositions.

Three were stillborn through difficult delivery.

Thirty-three and one-fourth per cent. of the 200 studied show over-weight, which is a very high rate. There is no doubt that this per cent. can be reduced with great benefit to the mothers and no harm to the infants, as a healthy infant of six to seven pounds soon doubles its weight on abundant breast milk.

The next most common error that I meet is the old notion so prevalent among the laity that all pregnant women should feel uncomfortable—that bad feelings and discomfort are a natural accompaniment of pregnancy. This notion keeps women from seeking their medical attendant and bringing to his notice the symptoms of toxemia of pregnancy—which begin as mild discomfort and gradually increase, until, if not corrected, end in eclampsia, death of the fetus or premature delivery. At best, it gives us a poisoned baby at full term that is too dumpish to nurse, and goes on as a weakling, too often swelling the infant mortality rates.

An antitoxie diet for the pregnant mother with increased elimination will often in a few weeks put the patient in absolute safety but, again, constant care for weeks is necessary, as you all know.

A word as to the effect of an antitoxie diet with complete rest in bed: Milk with bread will frequently reduce a rapid pulse and check the high blood pressure observed in toxic cases, but it will, if given liberally, produce an over-sized child. I have in two instances had a child born at term weighing nine pounds and eight pounds and four and one-fourth ounces respectively,

where the mothers were kept in bed and given a bread and milk diet for six weeks. In both cases the patient had been inactive and hearty in diet up to the time of consulting me, and both women were not of the usual normal type. The one whose child weighed nine pounds was a poorly developed young woman with cleft palate, and greatly spoiled by her relatives who had not understood her condition and had no idea she was in danger.

The other case was a primipara of thirty-eight years, weighing 150 pounds, with pendulous abdomen, contracted flat pelvis and painful edema of limbs. Habits of hearty living and inactivity. The patient was brought to me at seven and one-half months and placed on bread and milk diet for the remainder of her waiting period.

In neither of these cases did albumin appear in the urine, but their heart action and general discomfort showed a well advanced toxic condition that meant trouble if not checked.

Two other facts should be put into the printed instructions to expectant mothers—the effect of alcohol and syphilis on the constitution of the unborn child. Alcohol is a race poison. It causes the child to be puny and weak if taken by the mother even in small quantities during pregnancy. If taken in excess it produces stillbirths, and it checks rather than increases the ability to properly nurse the new born. An alcoholic father reduces the vitality of his offspring, but an alcoholic mother leaves a greater mark of weakness upon her unborn.

Syphilis is another race poison. Mothers who have had the misfortune to have had syphilis should take the greatest pains to place themselves under treatment, whether they have been pronounced cured or not, if they find a child is about to be born to them. The mother is often ignorant of her malady, but public instruction is getting so thorough that she is able to grasp the meaning of such a paragraph, and it is the duty of the physician to inform such patients of the nature of their illness.

The effect of lead and phosphorous poison should also be recorded in such literature.

Last, but not least, the presence of an infectious vaginal discharge should be at once reported to a physician for treatment during pregnancy. Chronic or even acute gonorrheas can be cleaned up in a week or ten days so that the infant's



eyes may be fairly free from danger at birth if the patient presents herself for treatment in time.

It would lessen difficulties if women understood that all unusual vaginal discharges should be reported promptly to the medical attendant, and the work of preventing blindness would be greatly facilitated if infected women were thoroughly treated before they fell in labor.

It is a routine practice with me to inspect the vaginal discharges and teach women to report any unnatural discharge promptly during pregnancy.

#### DISCUSSION.

Dr. Van Derslice has found hyperacidity the most frequent disorder in the pregnant mother, and much of the vomiting of pregnancy, in his opinion, is due to the intoxication caused by the nerve reflex action in this condition.

By putting these cases on a very large amount of magnesium monoxide we will usually control the hyperacidity and at the same time to a marked degree lessen the vomiting. In the cases of high blood pressure these mothers should be put upon a diet as soon as the high blood pressure shows itself rather than waiting for any other findings from the kidneys. The amount of milk should be distinctly limited to two quarts in twenty-four hours. We can take care of the hunger in the mother in a great many better ways than the giving of bread and milk.

He usually allows salt pork cooked with creamed vegetables. We know that the amount of fat in the gastric contents to a very large extent governs the length of time which food remains in the stomach, so the cases of high blood pressure will be made far more comfortable by giving fats, green vegetables, a limited amount of milk and cutting down on the starch, such as bread and potatoes, etc.

In the treatment of eclampsias of the new born if one puts into the stomach two and a half ounces of normal salt solution, this to be followed every four hours by an ounce to two ounces of normal salt solution or a citrate of soda solution, the eclampsias disappear within twenty-four to forty-eight hours. This treatment has shown a very beneficial effect on the outcome of the cases as compared with any other treatment that he has used.

Dr. Shawl asked Dr. Davis what she does in cases of swelling of the limbs—where there is a good deal of swelling, so much so that sometimes the skin will break and cause a great deal of trouble.

Dr. Davis: The paper was a bit too short to go into details in regard to checking the complications of pregnancy—I purposely left that out. There is, as Dr. Van Derslice says, a great deal of material in the way of treatment of these toxic cases, and there is a great deal that is not done toward recognizing mild toxic conditions in pregnancy. I quite agree with Dr. Van Derslice that the vomiting of pregnancy is a symptom of toxemia, no matter how mild it is—it is not physiological, it is abnormal, and I always consider it so.

I have many patients that go through their pregnancies without any vomiting, and I dislike to see it classified in the text-books as a symptom of pregnancy. Of course it is a complication of pregnancy, it does come so often that I think it is worth while for us to understand that these toxemias are much more frequent than we are accustomed to thinking and the mildest case of toxemia deserves treatment. I believe the regulation of diet, although I cannot go into all the details of that in this short paper, are very essential.

I also believe that the doctor's idea of giving bread and milk, or milk alone, and simplifying the diet is good, but even on two quarts of milk a day a patient, if not active, will build up a very large child and that is one of the things I like to prevent. Two quarts of milk is a great deal for a patient who lies in bed.

In regard to the question asked about edema of the limbs, those cases are almost invariably toxic cases. They may not have any albumin in the urine, and albumin is really one of the last and latest signs of the effects of toxemia in the pregnant woman. It means that this woman has been toxic so long that her kidneys are ill as well as some other organs in her body, and we ought not to rest securely when we find that the urine is simply free of albumin, but these other symptoms, these general symptoms of the patient, should be taken into consideration.

The patient who has an edema of the limbs has a weak heart and it probably comes from the toxic condition, and I treat that patient absolutely from an antitoxic point of view. I put her on an antitoxic diet, that is, take her off of her meat diet, do not allow her to multiply any toxins by using her muscles, and cut down all of the toxins we can. Milk is a naturally antitoxic food, and probably because it contains some of the element of the thyroid gland. That is an interesting story and will bear investigation—that all breast milk contains some of the elements of the thyroid gland, and one of the things it does is to kill the toxins of the body and that is why a milk diet helps these women so wonderfully, because from the animal you get the milk from there is a portion of that thyroid extract which helps her to eliminate her toxins.

---

#### THE DUTY OF THE STATE TO THE • CHOREIC CHILD.\*

C. B. KING, M. D.,  
CHICAGO.

From the days of Sydenham up to within the past five years, chorea was considered a functional disease. At present it is recognized to be an infection, probably of a streptococcic type and undoubtedly closely related to the rheumatic infection. Even in the days previous to its recog-

---

\*Read before the Section on Public Health and Hygiene at the Sixty-seventh Annual Meeting of the Illinois State Medical Society, May 9, 1917.

nition as an infection, the close relationship between chorea and rheumatism was recognized, and now that rheumatism is undoubtedly known to be a streptococcic infection, not only the inference but the proof that chorea is also due to an infection is recognized.

*Etiology.*—Since chorea is due to an infection and that probably a streptococcus, we are interested mostly in the atrium of the infection. Upon investigation we find this to be in the majority of cases through the mouth or tonsils. Worry and exposure, I believe, have very little to do with the etiology of the disease. Age, seven to fifteen years. Sex, about evenly divided.

*Pathology.*—The pathology is the pathology of the complications, either endocarditis, myocarditis and occasionally rheumatism.

*Symptoms.*—Vary from slight irregular twitching, possibly more marked on one side of the body, to the severe convulsive movement that throws the child out of bed. In the common or ordinary type the disturbance is more marked in the upper extremities. In disposition the child is entirely changed, becomes irritable and quarrelsome, cannot get along with brothers and sisters or other playmates. Usually there is a slight temperature. The child has an appearance of anemia, the red count usually is below normal. Occasionally a hemic murmur can be heard; more often no murmur can be heard at all. In cases that develop an endocarditis, a murmur can usually be heard; if not, a suspicious weakness will be noticed. Occasionally there is an interference with speech; there seems to be an incoordination of the muscles of phonation.

*Course.*—The course varies from four to eight or ten weeks in the ordinary case. A fatal issue is almost unknown except in severe recurrent cases and those complicated with an endocarditis. It has been my experience that in the cases developing a serious endocarditis with incompetence that they usually recover from the primary attack but will succumb to a second or third recurrence, and rarely reach adult life.

*Diagnosis.*—As a rule it is quite simple; hereditary ataxia may be confusing at first, but the irregular twitching, the age of the patient, the family history, the reeling gait and mystamus make it usually easily differentiated.

*Treatment.*—Inspect the mouth and throat. In a vast majority of cases enlarged tonsils will be

found; if not enlarged, at least diseased. Remove the tonsils. If the teeth need attention, have the dentist clear them up. Have the patient kept in clear, dry surroundings; the very mild cases do not necessarily need to be kept in bed; take them out of school and away from all playmates. Sunshine and fresh air are very important. Simple, wholesome food, avoiding an excess of meats.

*Medicinal.*—After removing the tonsils and looking after the teeth, put an aspirin Grs. 5, or salicylates in combination with small doses of bromides. Occasionally I find by alternating the aspirin with arsenic more rapid recovery is brought about.

In cases complicated by an endocarditis, absolute rest in bed, and an ice bag over the heart, liquid diet, and digitalis if indicated should be the rule.

If the State and our State and local boards of health have a duty to perform, it is the prevention of infections. How can this best be done, particularly in chorea? Now that most municipalities have school inspection, it should be the duty to warn parents of children whose tonsils and teeth are diseased of the liability to chorea and the possibility of endocarditis complicating it, so that they could have them properly treated.

Every child showing nervousness or twitching should be carefully examined and excluded from school, not so much as a menace to others, but for its own benefit, because some parents apparently have to be forced to take proper care of their offsprings. In cases where the family circumstances are such they are unable to give them the proper care, the State should step in, through the medium of the county physicians or hospitals, and give the child the proper care at the proper time so as to prevent in later life the individual being a burden to his family or the State.

---

## THE ETIOLOGY OF POLIOMYELITIS.\*

JOHN W. NUZUM, M. D.,  
CHICAGO.

*Historical.*—The disease infantile paralysis or poliomyelitis, as you all know, is not a new disease. In 1840 von Heine separated this type from other forms of paralysis and in 1887 Medin first directed attention to its occurrence in wide-

\*Read before the Section on Public Health and Hygiene at the Annual Meeting of the Illinois State Medical Society, at Bloomington, May 9, 1917.



spread epidemics. The Swedish epidemic of 1905 has been carefully studied by Wickman, Harbitz and others. From the continent the disease has spread to other countries and within the past few years serious outbreaks have occurred in the United States. In New York City in 1907-1908 there were approximately 2,000 cases with a mortality of 6 to 7 per cent. During the summer of 1916 New York City was again visited by a terrible epidemic of some 9,000 cases with a mortality of approximately 25 per cent.

Chicago was likewise visited by an epidemic during the summer of 1916. According to the Chicago Health Department there were 285 cases with a mortality of 15 per cent. Practically all of these cases were isolated in one ward of the Cook County Hospital. Necropsies have been performed on nearly all of the fatal cases and it is my purpose here to relate briefly the important facts gleaned through an intensive study of the above epidemic.

*Bacteriology.*—Pieces of the brain and spinal cord were secured as soon after death as possible under sterile conditions, and while the bodies were still warm and inoculations were made on various cultural media. In 13 out of 15 cases studied to date we have succeeded in isolating the same peculiar microorganism in pure cultures. Dr. Mathers of the Memorial Institute for Infectious Disease, and Dr. Rosenow of the Mayo Clinic, working independently, have both reported similar results.

Aerobic and anaerobic cultures were regularly made from small pieces of the human brain and spinal cord inoculated into sterile ascites fluid, ascites dextrose broth, and ascites fluid to which a small piece of sterile rabbit's kidney was added. The cultures were placed in the incubator at 35 C. (95 F.) for from one to ten days.

In the aerobic cultures, bacterial growth usually appeared at the end of twenty-four hours as a fine granular grayish precipitate along the side of the test tube, rapidly settling to the bottom of the tube to form a heavy white sediment. In anaerobic cultures made according to the method of Flexner and Noguchi, bacterial growth is slow. Usually after four or five days—often as long as seven—a scanty growth first manifests itself as an opalescence arising around the tissue fragments in the bottom of the test tube and gradually ascending upward in the medium. Later a

fine granular precipitate forms which falls to the bottom of the culture tube.

Morphologically the microorganism, when grown aerobically, is a gram-positive micrococcus arranged in pairs and tetrads chiefly, but also appearing in short chains of from three to five. It presents essentially a diplococcus arrangement. In anaerobic cultures and in the human ascitic fluid mediums to which a sterile piece of rabbit's kidney is added, growth is scanty and the organism appears in a much smaller form; at the end of two or three days it has been repeatedly observed as a very minute micrococcus and barely visible under the oil immersion lens. It stains by Gram's method and appears in pairs, short chains of from three to five, and in small clumps. After from five to seven days' growth under anaerobic conditions, it often closely approximates in size an early twenty-four-hour growth of the micrococcus grown aerobically.

On blood agar plates the organism appears at the end of forty-eight hours as a pin point colony surrounded by a narrow zone of hemolysis and often exhibiting a slight greenish color. When a growth has once been obtained, subcultures grow rather luxuriantly on the usual cultural mediums. It ferments the saccharids with the exception of inulin and raffinose. Gelatin is liquefied at room temperature. The thermal death point of the microorganism has been found to be an exposure of 55 C. (131 F.) for thirty minutes. It stains with varying intensity with the anilin dyes.

From the cerebrospinal fluid obtained by lumbar puncture from patients suffering from acute poliomyelitis, the same gram-positive diplococcus arranged in pairs and short chains has been isolated in pure culture with remarkable constancy after cultivation aerobically on ascites dextrose broth to which a fragment of sterile rabbit's kidney has been added.

I would *emphasize* that we have found that this same peculiar coccus is present in the spinal fluid with striking regularity and can be easily isolated from the spinal fluid both before and after death. Cultures are obtained with great ease by inoculating a 1 per cent. dextrose broth media with 1 to 2 c. c. of the spinal fluid and incubating under aerobic conditions for 24 to 48 hours. Initial cultures on solid media are difficult to obtain. There is evidence at hand to show that this same coccus is present in the spinal fluid of cases from

widely separated districts and if future study shows that the coccus is a constant attendant of the disease, it would seem that the early diagnosis of infantile paralysis will be greatly facilitated.

The results of animal inoculations experiments with the poliomyelitic coccus have been recently reported in various medical journals. I feel that evidence is rapidly accumulating to prove the etiologic relationship of the coccus to the disease infantile paralysis.

#### THE PRODUCTION OF AN ANTIPOLIOMYELITIC SERUM

In the Journal of the American Medical Association for January 6th of this year, I reported that by the process of animal immunization with the coccus regularly isolated from the spinal fluids and the central nervous systems of poliomyelitic patients, an antiserum can be produced. Furthermore, such a serum has been found to contain antibodies in high titer, viz., opsonin, agglutinins and complement fixation bodies. This serum possesses definite protective and curative properties against the coccus and also against injections of lethal doses of virus in monkeys. Accordingly it seemed fair to conclude that with potent polyvalent antiserum prepared in the manner outlined above, some definite therapeutic value might be anticipated in human cases of the disease.

With such a serum prepared both in the horse and also in sheep I have had the opportunity thus far to treat eight patients suffering with infantile paralysis. In two of these cases which received the serum early after the onset of the disease complete recovery has followed. While the number of treated cases is yet too small to draw any conclusions relative to the therapeutic value of immune serum in poliomyelitis, still I believe that serum therapy when instituted early in the disease possesses the power of arresting the spread of the paralysis and will ultimately prove to be of genuine real value.

I wish to state that I feel that we should treat a large series of early cases together with untreated cases as controls before one is entitled to draw any conclusions regarding the value of serum. It is well known to all of us that the degree of spontaneous recovery in poliomyelitis is at times remarkable and this factor alone serves to complicate the problem.

With your permission I wish to show you a few lantern slides illustrating the recent bacteriological and experimental findings in infantile paralysis.

Dr. Nuzum presents slides and illustrations.

#### SOME OBSERVATIONS ON THE EPIDEMIOLOGY OF POLIOMYELITIS\*

C. W. EAST, M. D.

SPRINGFIELD

#### SEASONAL INCIDENCE—1916

##### Ten Day Periods—Outside Cook County

May 1-10.....	Decrease ....68%
May 11-20..... 1 case	June 1-10..... 2 cases
May 21-31..... 3 cases	June 11-20..... 5 cases
—	June 21-30.....12 cases
Total ..... 4 cases	—
July 1-10.....18 cases	Total .....19 cases
July 11-20.....32 cases	Increase ....375%
July 21-31.....39 cases	Aug. 1-10.....49 cases
—	Aug. 11-20.....64 cases
Total .....89 cases	Aug. 21-30.....63 cases
Increase ....368%	—
Sept. 1-10.....71 cases	Total .....176 cases
Sept. 11-20.....45 cases	Increase .....97%
Sept. 21-30.....22 cases	Oct. 1-10.....24 cases
—	Oct. 11-20.....20 cases
Total .....138 cases	Oct. 21-31.....12 cases
Decrease ...21.5%	—
Nov. 1-10..... 4 cases	Total .....56 cases
Nov. 11-20..... 8 cases	Decrease ....59%
Nov. 21-30..... 6 cases	Dec. 1-10..... 3 cases
—	Dec. 11-20.....
Total .....18 cases	Dec. 21-31..... 2 cases
	—
	Total ..... 5 cases
	Decrease ....72%

#### 1917

Jan. 1-10..... 2 cases	Feb. 1-10..... 4 cases
Jan. 11-21..... 1 case	Feb. 11-21..... 4 cases
Jan. 21-31..... 1 case	Feb. 21-28..... 2 cases
—	—
Total ..... 4 cases	Total ..... 6 cases
Mar. 1-10..... 3 cases	Apr. 1-10..... 5 cases
Mar. 11-21..... 1 case	Apr. 11-20..... 4 cases
Mar. 21-31..... 1 case	Apr. 21-31..... 4 cases
—	—

Total ..... 5 cases      Total .....13 cases

Total cases from May 1, 1916, to May 1, 1917, 438.

Deaths, 63.

Death rate, 14%+.

Compared to Cook county:

Statistics, 338 cases.

Deaths, 44.

Death rate, 13%+.

1916—Incidence outside Cook county—First case was one month earlier, May 10-20, compared to June 10-20.

\*Read before the Section on Public Health and Hygiene at the Sixty-seventh Annual Meeting of the Illinois State Medical Society at Bloomington, May 9, 1917.



Greatest incidence rate, 10 day period:

Outside Cook county, Sept. 1-10, 71 cases.

Cook county, Aug. 1-10, 49 cases.

In Cook county, acme of epidemic was reached one month earlier than outside.

Period of greatest incidence for the year:

Outside Cook county, July 1 to Oct. 20.

Cook county, July 1 to Oct. 10.

Greatest monthly incidence:

Outside Cook county, August.

Cook county, August.

Incidence as to localities:

Earliest known case—Standard, Putnam county. Onset, May 15, 1916.

Next earliest known case—Belleville, St. Clair county. Onset, May 20-31.

General distribution outside Cook county:

June—15 cases in 7 counties: Putnam, Bureau, Kankakee, St. Clair, Ford, Macon, Macoupin.

July—79 cases in 32 counties.

August—176 cases in 37 counties.

September—138 cases in 47 counties.

October—56 cases in 26 counties.

November—18 cases in 16 counties.

December—6 cases in 5 counties.

January—4 cases in 4 counties.

February—6 cases in 6 counties.

March—5 cases in 4 counties.

April—13 cases in 12 counties.

Principal foci in relation to urban and rural conditions:

La Salle county, 60 cases.

Foci—La Salle, Ottawa, Streator—44 cases.

Outside above cities, 16 cases.

All contiguous to La Salle, Ottawa and Streator.

All but one of the cases in Livingston county—the one at Pontiac—were contiguous to Streator, Streator being the market center. Total, 14 cases.

The first case at Standard, Putnam county, was not recognized until July 3. On this date four other cases were found at Standard, and one at Streator, the latter having been at his parents' home in Cherry, Bureau county, for a few days after the onset at Standard, and then was taken to his grandparents' home in Streator, where he was found and quarantined July 6, about two weeks after the onset.

Contacts were known to have occurred between all the Standard cases.

Two of the Standard cases were taken repeatedly to La Salle for treatment from the onset, about June 10-20, until discovered to have poliomyelitis, July 3.

In Ottawa the first five cases were in the same neighborhood among children who played together. Four of them were sick simultaneously. One was taken sick the day of his brother's funeral, five days after the onset of the latter's illness.

In the La Salle county focus there were two cases in each of three families; four cases in one family. In one family the onset of the second case was five days after the onset of the first. In one family the two were sick simultaneously. In one family the second case was three weeks after the onset of the first.

In one family, all were taken down during the same week, three during part of the week, and the last four days after the first three.

Henry county, including contiguous portions of Bureau and Stark counties:

Kewanee had ten cases during July and August.

Stark county had one case in June, one case in July and five cases in August. Three of the latter five were in one family simultaneously, and the other case in a person attending the same school as the former, the latter being sick at the same time as the three. All five had attended the Kewanee fair and were taken sick the following week. The first case in Stark county occurred the first week in June, apparently unrelated to any of the above.

Adams County—Quincy had six cases, beginning in July. In August, three cases occurred in Adams county, two in the same family, both of the latter sick simultaneously.

Henderson County—Three cases sick simultaneously in Dallas City. Two cases in Lomax township contiguous. One and three months subsequently.

Knox County—Five cases in Galesburg, each in a week consecutive to the former.

#### CONCLUSIONS.

1. The seasonal incidence of poliomyelitis is emphatically seen, notwithstanding some cases are seen each month.

2. The contact and focus influences in the incidence cannot be ignored.

3. The widespread incidence during the increment of the epidemic is a fact not yet explained.

4. The simultaneous incidence in cases closely related suggests a common source of infection. The explosive character of these onsets suggests infection from food contamination.

5. The prevalence of the disease, its increment during the period of greatest insect and dust prevalence, and its decrement with the subsidence of these cannot be ignored.

6. The above studies suggest that the disease is primarily urban and secondarily rural. These studies are as yet very incomplete, and we hope to have opportunity to extend the analysis of our statistics.

#### DISCUSSION ON PAPERS OF DRs. NUZUM AND EAST

DR. HOLMES: I don't think that it would be at all proper to let this presentation go by without a very general discussion. I am greatly interested in the fact that this research was made in a public institution. We are now cultivating a sort of patriotism. For years we have been depreciating everything which had a political, so-called, basis but in this particular instance we have an example of an efficiency in public

service which is extremely hopeful and it is very promising.

Here was the Cook County Hospital, under the Commissioners of Cook County, who were easily induced to undertake to further this particular research and do it promptly and without delay, and with a result which it seems to me cannot be at all measured by the relatively small number of patients with this disease.

The research which will bring about a promising method of curing or preventing this disease is not in itself the only thing. It shows that there are many other conditions which are equally susceptible to research, to solution, to cure and to prevention and that is what we must understand now—that these researches are going to be done, and they are going to be done without the slow processes of endowments and the salaried serenity of those who manage such research funds, but they are going to be done by a wide-awake, live public sentiment which will support the constantly increasing number of men who are ready to devote their lives to research like this.

So it seems to me that this research is one which we must not only praise for its results, but we must be proud of it because it comes from a public institution. I can't say anything critical in regard to the work. It has been carried out so openly and plainly that it is not susceptible to criticism and while there is much to be done before the full fruit of this research is realized, it has certainly put Cook County Hospital on the map of Medical Research.

DR. PETTIT OF OTTAWA: I don't want to discuss this paper particularly, but as one of the passing generation (if not the past generation) of medical men, I want to pay my respects to Dr. Nuzum, and tell him how much I appreciate the work that he is doing and the men of his generation. To me, one of the most remarkable things, as I attend these medical society meetings in the last few years, is the work that is presented to us by the very young men. It is simply marvelous. This work that Dr. Nuzum has presented to us today is so far-reaching and of such magnitude that if there was nothing else on this program than would invite us to this session of the Illinois State Medical Society, it would be worth the while of every medical man in the state of Illinois to attend.

It is an epoch-making event. Just think! Only a year ago we stood appalled in the presence of this disease, and now in less than twelve months we can say that the question is practically solved, so nearly so, at least, that there isn't much more to be done. I say, all honor to Dr. Nuzum and his associates, and the young men who are doing such splendid work as they are doing.

THE CHAIRMAN: I was glad that Dr. East did not bring out the opinion that poliomyelitis was directly contagious. Apparently he did not, because our observations in LaSalle were quite contrary to that. We were in that LaSalle County that has so many cases, and we had several cases right in our city. One family in particular I want to call attention to.

There was a child about eight years old, a boy, who was treated for nearly three years for rheumatism, when he had a distinct paralysis and the case was not reported. The entire neighborhood took pity upon the poor young fellow and they carried him from one house to the other and let him play on the floor and play with the other children in those other families; when we found out about the case we made a careful investigation of this matter and we put fourteen other families under quarantine, and not a single case developed in those fourteen other families, although there were from three to eight children in every one of these families.

In another case in Peru, the child, in the first day of the illness, was quite ill with headache and pains in the back of the neck, but no paralysis. The child was taken by the parents to a wedding on that day. The child was lying about, on the couch most of the time, and there were five other families with children at this same wedding. The children were all together. The other five families were put under quarantine but no cases developed.

DR. NUZUM: In closing I would repeat that there still remain many important facts which we, as yet, know very little about. At the present time we are working intensively on this serum proposition. We have a horse at the hospital that I have been immunizing now for the past six months, and I can say so far that repeated intravenous injections of the poliomyelitic coccus have produced antibodies in high titer. Furthermore, this serum has acquired definite protective properties against fatal doses of virus injected intracerebrally into monkeys. I believe that ultimately an immune serum will be generally employed in the treatment of poliomyelitis and will prove to be of real value in this disease.

DR. EAST: Mr. Chairman, I appreciate what Dr. Holmes and Dr. Pettit have said. We can't be too generous in our admiration for the work done by Dr. Nuzum, and for him himself in the work, and yet, knowing as we all do, the human mind somewhat, I think a word of caution is really necessary.

Somehow or other, as a public health administrator, I have learned to have my lightning rod up, and we cannot afford to let it get out from under us. Mind you, I am not criticising anything Dr. Nuzum has said, because he agrees with me exactly in this; but what may not logically but after all really be spoken of as a deduction from this symposium or at least from his paper, that we have a serum.

Now some of us for some years have been seeing quite a good many cases. I have seen them in New York City and on Long Island, and I saw a majority of them in the country outside of Chicago in this state last year. Sometimes this problem is before me, to really convince the local physician and the parents that the case has been one of poliomyelitis, because the child is well on the way to recovery when an inspector sees him, and I know frequently (you will excuse me if I say this) with a skill any man will develop in handling many of these cases,



for example a trunk muscle, I make out clearly, I *know* that there is paralysis there, but you can't show it to the average doctor. The fact is he has forgotten his muscle anatomy and knows almost nothing about muscle physiology, (I say this without any rancor at all) and the parents know less than he does and to convince them that we have had a case of poliomyelitis, very often, is quite a task.

Of course, they will say that during a day or two or three the child was quite paralyzed, but now it is clearing up, and I have seen little groups in these larger epidemics, of say fifty people, where the recovery would be forty or forty-five per cent.—now I don't mean that, I mean eighty or ninety per cent.—that's what I mean—where residual paralysis at the end of three or four weeks could be found only by methods of precision (?) we have in examining for paralysis.

So with this tendency to recover, with the tendency of the disease to pick out not limbs or bodies or necks, but the muscles of those limbs, and with the varying tendency of recovery sometimes as high as ninety per cent. in cases, of course we will have to have very many cases carefully studied under serum treatment, as Dr. Nuzum has said. I have heard him twice on this subject, and both times he has emphasized that. Dr. Nuzum, you understand this is not criticism, but it must come before the people that we have not yet a serum to offer.

The thing I am asked from one end of the state to the other is, "Well, you have a serum, haven't you?" and when I tell them "No" they think I am lying, and they usually think I am trying to conceal something from them. I want to say that any man who sees acute cases in the field will see very many spontaneous recoveries of undoubted poliomyelitis cases.

---

## THE DUTIES AND PROBLEMS OF THE SECRETARY OF AN ACTIVE COUNTY MEDICAL SOCIETY.\*

THOS. G. McLIN, M. D.,  
Jacksonville State Hospital  
JACKSONVILLE, ILL.

In presenting this subject, I wish to emphasize the duties of the secretary, which he must perform in order to keep the society active and progressive. The duties necessary to comply with the constitution and by-laws, keep the society in existence and in good standing with the State society, are very meager compared with what is necessary to keep the society progressive. More depends upon the secretary than upon any other officer or member of the society. The co-operation of the other officers and members of the society is necessary and if there is not co-opera-

tion, it is one of the first duties of the secretary to devise a way to obtain co-operation.

I wish to enumerate some of the things a secretary should do, other than keep records, collect dues, make reports to the State secretary and answer necessary correspondence. To be efficient, the above must be kept accurately, all correspondence properly filed and the business of the society indexed so it can be referred to readily at any time. The secretary should keep in touch with adjacent county societies, attend as many meetings as possible outside of his own society, and never be absent from a meeting of the local society except by absolute necessity. The secretary must see that the program is prepared for meetings a sufficient length of time in advance to give members or other speakers ample time to prepare the subject for presentation. The leader's attention should be called to the date on which his paper is to be read two or three weeks prior to the meeting, so there will be no reason for his not being prepared on account of a misunderstanding in date. This may be diplomatically brought about by asking for the exact wording of the subject, if any change is being made in the original suggestions, or, if the speaker is a member of the society, he may be asked to suggest someone to lead in the discussion or to discuss some phase of the subject. If the speaker is from another county, he should be written a week or two in advance relative to the time he will arrive, so that arrangements can be made for his entertainment.

Occasionally after careful consideration has been given to the program, something occurs and the secretary is disappointed by a notice that the essayist is unable to fill the appointment. If this notice is received after notice of the meeting is mailed and there is not time to send another notice, a substitute should be obtained, preferably to give an informal address or a short essay on the subject as announced. If notice is received before notice of the meeting is mailed and no one is prepared to take up the same subject, another subject should be substituted. The secretary should always have someone who is prepared to present a subject to the society on short notice. If no one else is, the secretary should have data so he can readily collect it and write a paper for an emergency. I have known this to be done successfully.

---

\*Read at the Secretaries' Conference at the Annual Meeting of the Illinois State Medical Society, May 9, 1917.

*How to Prepare a Program.*—The duties of the program committee often fall entirely upon the secretary. If the society meets for a short period, a few hours during the afternoon or evening, the program should not be complicated. A symposium on one subject or one paper with one or more to lead in discussion of the paper from a definite standpoint, is usually better for an evening meeting (from 8 to 10 P. M.) than several papers on different subjects, for there is more time for general discussion, bringing out special points, which are often not grasped if there is no time for a general discussion.

It is sometimes difficult to get members to write papers. Often promises are obtained quite readily, but for no definite date. When a date is suggested, they begin to make excuses and in such conditions the secretary or program committee should be on the lookout to avoid a disappointment in the program. Often at such a time the difficulty can be overcome by suggesting that the subject be divided and other members asked to write on some division of the subject. The secretary should arrange for men of exceptional ability outside of the county to address the society as often as possible. Such addresses may take the place of a regular meeting or be provided for by special session.

The interest of the members of a society depends upon the programs, and the program for the year must be well arranged and carried out accordingly. Besides the regular meetings, either monthly or otherwise as decided upon by the society, the secretary should arrange for special meetings, such as clinics, picnics or other special occasions. It is an advantage to have one or more regular yearly special features of the society. Our society has two—one, our annual banquet, is held in November, and the other, a joint picnic of the Cass and Morgan County Societies. For each event, we obtain men of wide reputation and always have a good attendance, including visiting physicians from other counties. Our joint picnic is held at a beautiful site in Cass County, and we have always been fortunate in having good roads at the time, and men of world-wide reputation to address us, and the results have been excellent, with increasing interest each year. Invitations to these meetings are sent to all members of County Medical Societies for a radius of about seventy miles. I wish to state that in 1915

and 1916, when I was secretary of our society, both speakers were obtained through one of our members who was not on the program committee, and the credit is not due the secretary. In 1915 we had as our guests of honor, Dr. and Mrs. G. W. Crile of Cleveland, Ohio, and in 1916 we had Dr. and Mrs. William Mayo of Rochester, Minn.; also Dr. Roundtree from the Medical Department of the University of Minnesota, Dr. David S. Fairchild of Clinton, Iowa, and a large number of visiting physicians. Dr. Mayo and Dr. Roundtree were the principal speakers. About fifteen different counties were represented at our 1915 meeting and in 1916 twenty or more counties.

The program committee is now arranging for a celebration of the fiftieth anniversary of the founding of our society. Nothing definite has been announced as yet, but it will probably be an all-day meeting, with dinner at noon, such as the society used to have fifty years ago. Several charter members are expected to be present. This committee is also arranging a booklet showing the history and progress of the society. This will be a souvenir given to members of the society and others who attend the meeting. The duty and honor of preparing this booklet belongs to Dr. W. L. Frank, our present secretary, and other members of the society who are assisting him.

In July, 1915, we had a picnic outing at a lake at Franklin, Illinois, and we expect to have another there this summer.

The above references to the proceedings of the Morgan County Medical Society are given for suggestions as to what a county secretary may do to make his society progressive.

#### DISCUSSION.

Dr. Simpson of Palmer believes the best means of getting a good attendance is by securing some speaker of note and announcing the program fully.

A banquet also has been the attraction for some very successful meetings.

Dr. Bower, who has served as secretary in Knox County for thirteen years, believes that a secretary, like a poet, is born, not made. It isn't a question of a man being a good physician, not a question of his being a good bookkeeper, it's not a question of keeping accounts right—that is all immaterial, that is detail, his office girl can take care of that.

He thinks a good secretary should talk to every member of his society once a week. If you talk to most of them you will find they are all right.

The secretary ought to have a few faculties. He



ought to be able to keep accounts in a sort of a way. He ought to send out a per capita every once in a while, have a good program once in a while, invite somebody in. And he ought to have some good specialist, some man of note.

The secretary must have a nose for news; if he hasn't, he hasn't any business to be secretary. You've got to tell your men often; you've got to get them prepared ahead of time.

## MEDICAL LEGISLATIVE WORK IN ILLINOIS.\*

DON W. DEAL, M. D.  
Secretary of State Legislative Committee.  
SPRINGFIELD.

My only idea in appearing before this section is to bring out the shortcomings of the legislative organization in Illinois from a medical standpoint as it compares with the splendid organization and concentration of efforts on the part of other practitioners. There is a woeful lack of interest shown in legislative matters by a majority of the individuals in the medical profession.

Certainly a scheme should be evolved which will increase interest among our own people and at the same time add to the funds available for legislative purposes. There is undoubtedly a field for developing legislative organization throughout the state that is commensurate with our problems as they confront us in the legislative halls. As yet, no united action has ever been attempted, and by this negligence, we are missing opportunities in developing a united front, which would benefit the public at large and place the medical profession on a higher plane. In speaking as secretary of the State legislative committee, I find that, in general, the county legislative committees in many localities, are made up of men who are either uninterested or are negligent as to their duties. It is necessary each year, on that account, to organize the state entirely independent of the county organizations, since so often they cannot be depended upon even in the smaller matters of answering correspondence.

While I am spending weeks in perfecting an organization, I find that but three in every ten members of the committees will even answer a letter. This necessitates in many instances, the writing of several letters to procure an answer.

As regards the expenditure of money, we feel

sure that organized cults spend several thousand dollars, and in some instances, collect many dollars from each individual in their societies. While our average expenditure per year will run from \$300.00 to \$500.00 and our per capita will average about \$0.05 yearly on legislative work.

It is safe to say that the twelve thousand five hundred doctors in Illinois spend per capita one-twentieth as much as the organization of three hundred and fifty Osteopaths. Since councilors have been comparatively liberal in approving our expense account, I feel it is our duty to organize.

Activity in the committee began six months before the opening of the State Legislature. At that time, the organization of an active state-wide committee was begun and completed to the point of family physician and personal friend of every senator and representative in Illinois.

After the legislature opened, we found it necessary to watch several bills after they were introduced and to follow them to their end. Every day the house bulletin was carefully gone over and each of the many hundred bills introduced were read by title for fear that the medical profession may be included.

House Bill 176 (Chiropody) was a very bad bill and finally the chiropodists were induced to withdraw it and introduce Senate Bill No. 226, which was satisfactory to us and in fact was practically written by Dr. Drake. It was followed through in order that objectionable amendments might be defeated.

House Bill 198 and Senate Bill 151, relating to eugenic marriages, were watched with interest. They were both defeated in the committees. We took no active part.

House Bill 266 which was introduced by the Osteopaths and would have given them the right to practice medicine and surgery in all their branches, was withdrawn as a direct result of the introduction of our own House Bill No. 657.

At first, it was our intention to introduce a bill to amend our old Medical Practice Act, which would make it fit in with the new administrative code and at the same time give the Osteopaths what they claimed they wanted: that is, protection from the cults that were coming on by the thousands, without any preliminary or professional educational requirements whatever.

Mr. Woodward, who wrote the consolidation bill for the Governor, was selected to write our

\*Read before the Secretaries' Conference at the annual meeting of the Illinois State Medical Society, May 9, 1917.

bill. He gave as his opinion, that the present Medical Practice Act was in very doubtful form and it was practically impossible to amend it in a manner that would give us the desired change. After consulting with Dr. Noble and Dr. Drake, it was deemed advisable in view of the recommendation of Mr. Woodward, that an entire Medical Practice Act be introduced since Osteopaths had already opened an attack on the Medical Practice Act. Mr. Woodward was instructed to prepare the same, which he did, and the bill now before the legislature has been pronounced by those competent to pass judgment, as the best Medical Practice Act in America.

So we now have House Bill No. 657, which has been followed through three hearings before the judiciary committee of the House and three readings on the floor of the House and into the judiciary committee of the Senate. It will require continued watch until the Governor signs it.

The osteopaths tried every method of amending the bill so that they could practice minor surgery, limited materia medica and obstetrics. They were beaten in every turn and finally received nothing for their activities except protection from the drugless healers, which is of great importance to us and of greater importance to the public. After defeat of osteopaths in committee they promised to get behind bill with us so that it would go through as amended.

Other kindred bills, such as Senate Bill No. 28 (Public Health District), Senate Bill No. 8, (Dispensaries), House Bill No. 300 (Forgery), Senate Bill No. 128, (Insanity Commission), and House Bill No. 575 (A Bill to amend the Dental Practice Act), were all followed through the mill.

We had two hearings on House Bill No. 279, which was the Consolidation Bill, and feel that the public and the medical profession are in wonderfully improved positions, as the result of this splendid piece of legislation. As the result of the combination of the Consolidation bill and of our House Bill No. 657, we feel sure that Dr. Drake is to organize a new department of health that will be superior to any similar organization in the union.

As the result of the new Department of Education and Registration, we feel the approach of a new epoch in the administration of the Medical Practice Act.

House Bill No. 685 (Criminal Jurisprudence),

was objected to and debated before the Judiciary Committee, and as a result, I feel sure that the bill will die in the committee.

We were prepared to fight the Social Insurance Bill, which was not introduced. I feel that the active opposition of the medical profession prevented its introduction.

A step is taken toward its introduction next year, by Senate Bill No. 348, which provides twenty thousand dollars for expense and creates a Board to investigate Social Insurance; the committee to consist of representatives as follows: Labor two, Employer one, Physicians one, Farmer one, Economist one, Social Worker one, and two other members.

We feel that the work of the legislative committee has never been more strenuous than at this present session and that if it were not for the splendid co-operation of the state membership in general and the generous allowances made by the council we would have had some very vicious legislation in the state. We can say that no objectionable legislation has been spread upon the statutes and that a great benefit has resulted to the public and profession by the action of the 50th General Assembly.

In the order of suggestions, it is my opinion that the separate County Societies should be more careful in appointing the membership of their local legislative committees and should insist upon appointing members who are deeply interested in medical affairs, and, if possible, in politics to some extent.

As another suggestion, I would recommend that different societies or individuals should subscribe for a complete set of bills, as they come from the committees in the House and Senate each year.

By this method the legislative committee would have some additional income and of more importance the individual societies and members receiving these bills would become more interested and would be enough posted on the subject to argue convincingly with their Representative or Senator.

#### DISCUSSION.

Dr. Shasta of Pike County: It seems to me that eternal vigilance is the price of safety and it takes a live, up-to-date committee to be watching the corners at all times in order to keep vicious legislation that affects the people and the physicians of Illinois from passing.

Dr. Sloane: I am the weakest member of this com-



mittee, in fact I am hardly a member of the committee at all. It has only been in the last four or five weeks that I have had any idea of the amount of work that Dr. Deal is doing all the time. He's been working fifty-two weeks, since the last meeting of the State Medical Society. It is hard for us to realize that there is really danger of losing our standing in the community and our butter and bread. I have only realized that the last four or five weeks and the reason he has an awful job and the reason that the Legislature sneers at our committee is because the rest of us pay no attention to politics at home.

Dr. Christy of Adams County: We felt the appeal of the legislative committee in our county and followed their suggestion very faithfully, I think.

We called a meeting of our society at one of the hotels; we went as a committee of the whole to the legislator and traced the whole matter out, and believe me before we left we knew just exactly how that legislator stood and knew how he was going to act when that matter came up.

Dr. Jones, of Danville: We instituted last year a method or system we thought was very good in having one of our monthly meetings as a legislative night and we invited our legislators from our districts as well as Uncle Joe, who was with us.

I received some literature from Dr. Deal and thought that it didn't need reply, but at the same time we got busy and the twenty-five or thirty men at that meeting sent about as many telegrams to our legislators.

Dr. Fiegenbaum felt that if compulsory health insurance is foisted upon us it will be a great detriment. The literature that we get now says that health insurance is coming and it is coming very fast. But it is not coming if we don't want it. We can defeat it.

I don't know, Mr. President, whether a motion is in order or not. I will make my motion and the house may decide. I move you, Mr. President, that we, as a Secretaries' Conference, earnestly advise our legislative committee to oppose the bill that is now introduced in the legislature and we in return will promise to do the very best we can to help this legislative committee to kill this bill before it is brought out of committee.

Motion is seconded.

The Chairman: We will hold the motion over until Dr. Deal has finished his paper.

Dr. Deal: I haven't anything to add except that the legislative committee, of course, are working.

Dr. Brown, of Sycamore: When you get the medical profession to look at these cults as they ought to do, and quit hobnobbing with them and going to visit patients with them, consulting with them because it is a few dollars in their pockets for the time being, then you will do something with this sort of bills.

Dr. Hall of Mt. Vernon: An ounce of prevention is worth a pound of cure. If we allow the various parties to nominate obnoxious men for candidates to our

legislature and then go ahead and elect them, of course we have a great deal of trouble with them when they get to Springfield.

In my district we look after the conventions. If a man puts himself up before a convention, we give him to understand if he receives our vote that we will not tolerate any vicious medical legislation.

Dr. Cantrell of Bloomington thinks health insurance means a great detriment to the medical profession, and he believes that contract practice has brought it about more than any other one thing.

Dr. Price of Green County: A year ago a resolution was introduced in the Green County Society prohibiting members of the society from accepting contract work. It was brought up the following meeting and passed.

Later one of our members put in a bid for the County work, and received the appointment as county physician at two hundred and twenty-five dollars a year, a job which had been paying before that time something like four hundred.

The result was that this same county physician is not a member of the Green County Medical Society. He's been ousted. We wouldn't tolerate it at all.

Regarding the practice of osteopathy and chiropractors, the Society brought up the letter that was received from the Osteopathic Association in Chicago. A motion was passed that the Secretary of the Green County Medical Society write the Osteopathic Association of the State of Illinois that the Green County Medical Society took no stock in osteopathy, would not cooperate with osteopaths, nor did they believe that there was any such animal as an osteopath.

Dr. Bacon: I wish to say in behalf of the Sangamon County Medical Society of which Dr. Deal is a member, that we approve of his action and that we are all aware of his activities in this matter and feel that he has done great work. I have been pleased to hear his report this afternoon and I will be glad to convey the news to the Society.

Dr. Deal: I haven't anything further to say except as regards Dr. Fiegenbaum's motion. I will say that we can pass a resolution but the legislative committee is working under the officers of the State Medical Society directly. If this resolution were brought to the attention of the President, I think it would do more good.

The Chairman: Dr. Fiegenbaum, what do you wish to do with the motion?

Dr. Fiegenbaum: The motion is before the house, but at Dr. Deal's suggestion I would change it and say that I move that we suggest to our President that we are opposed to the present bill on health insurance that is now in the Legislature. My former motion was that we suggest to the legislative committee and now Dr. Deal informs me he is working directly under the direction of the State organization, headed by Dr. Noble, and I change the motion in that form.

## THE ORGANIZATION OF MEDICAL LEGISLATIVE WORK IN THE COUNTY SOCIETY.\*

F. C. GALE, M. D.,

Chairman of Legislative Committee, Tazewell County Medical Society.

PEKIN, ILL.

In order that effective organization for medical legislative work be carried on in the county society, certain elements are essential. These essential elements are:

1. A live county society.
2. A live committee on political action.
3. Live county societies in adjoining and surrounding counties.
4. A live legislative committee of the State society.

We will first discuss the first of these; viz.: "A live County Society." Any society is what its members are; so that a live county medical society is one composed of live doctors. To my mind a lot of societies and a lot of society members are dead and don't know it, and some day the chiropodists will give the undertakers a tip to proceed with the funeral. Then these dead ones will wake up long enough to wonder why they are being buried so unceremoniously, and they will be much more surprised at the flowers on their chests than they ever were at the moss on their backs.

A live one is one who knows what he wants and goes after it, and what he does not want and tries to prevent it. The trouble with most members of county societies is that they do not know what the profession wants in a legislative way, nor do they know of the dangers which threaten them through legislative means. They think that the legislative committee of the State society will attend to all of that and that they will not have to bother with it at all. There is where they make a big mistake.

The State Committee has to deal with legislators who have already been elected, while the individual members deal with them before they are elected or even nominated. And how many of even those who are here today broach the subject of medical legislation when the honorable Mr. So-and-So explains his peculiar fitness for the office for which he is striving, and modestly ad-

mits that he is the only logical and best man for the place; he has a platform that fits the greatest need of everyone in the district, except the doctor. I have seen many declarations of principles designated to serve as bait for the wets and the dries, for the farmer and the capitalist, for the fisherman and the manufacturer, for the unions, for the women, for the railroads and the laboring man, for hard roads and for soft roads, but I have yet to be interviewed by a man seeking office who had anything for the medical profession. We are ignored and our bills make good trading stock after they are elected.

So we listen to what they have to say and said Hon. Mr. So-and-So leaves without even knowing that there is such a thing as a medical organization in that district. And yet who has a better right to question the viewpoints of prospective law makers, whose motives and actions are more open to minute inspection, who is less selfishly disposed, who stands on a higher level of intelligence, education and influence, than the physician? We have nothing up our sleeves; we are not trying to put anything over on anybody, and we want only what is right.

I have no use for the physician who never lets anyone know his party affiliations, because it is bad for business; who never lets it be known whether he is wet or dry for fear of hurting his business; who will not work to elect a good man or to defeat a bad man because of a possible effect on his business. If business interferes with your right as a citizen to speak, vote and act as you think best, quit business.

2. *A Live Committee on Political Action.*—I have designated the county legislative committee as the committee on political action because there is where its greatest value lies. It is to represent the society in officially approaching candidates for office, and in advising them after elected. But it is up to each member of the society to let candidates know that the committee does represent them. It is also up to the committee to let the candidate understand that the legislative committee of the State society represents all the societies of the state, but more especially the counties which the legislator represents.

Just a word here regarding the Committee on Legislation of the State society. When we consider the lack of co-operation and support from districts outside of Chicago, it seems to me that

\*Read before the Secretaries' Conference at the sixty-seventh annual meeting of the Illinois State Medical Society at Bloomington, May 8, 1917.



the results they have achieved have been simply wonderful. I am told that the chief obstacle that committee runs against, and one which I know is one the county secretary meets, is the indifference of the individual doctor. Illustrating this phase of the subject, last fall before the primary election the committee on political action of my home society wrote letters to 187 doctors in our district. Each calls for an answer," if for no other reason than to tell us you are with us." Listen; 187 letters to men who had pen, ink, paper, stamps, envelopes and post cards handy, and only one answer. That's indifference.

Regarding the committee, I believe the smaller the better. The ideal number would be one, but few societies are blessed with a member who has the energy, breadth of vision, and freedom from party bias, as well as the confidence of his fellow members, that would make him entirely suitable. Therefore, a committee of two, a democrat and a republican, would in most cases be better. In county affairs this committee works alone. In state legislative matters it should work in connection with, be in communication with and have at least one meeting before senatorial elections with similar committees from the other county societies in the district. Their final report should be signed by the committees from all of the counties in the district, and sent to every physician in the district whether a member of the society or not.

There is no reason why the committees from the counties composing a congressional district should not co-operate in the education of would-be and future congressmen. I believe if the general profession had made it a point before the last general election, that at least some of the wrongs under which we suffer would have already been corrected by Congress.

Case reports being a favorite method of making a medical society paper long enough to fill up the time, I will read the history sheets of the activities of the Committee on Political Action of the Tazewell County Medical Society during our last attack.

1. Within the county we had been blessed with a coroner who was extremely ignorant and very grasping, and very distasteful to the profession. He was strongly entrenched politically and of the dominant party. His re-election seemed assured, when our committee induced a

physician of each party to offer himself as candidate for the nomination. Then as far as I know every physician in the county worked hard for the nomination of these two men. They were both nominated and the work of the committee was done. Whoever was elected was satisfactory.

Our district is a country district; our members are country doctors, fairly representative of half the district and half the doctors in the state. Our politicians are no better and no worse than those from other districts. First we waited until the last day for filing petitions for nomination for State Senator and State Representatives. Then we wrote to every physician in the district (187) using a slightly different form for the presidents and secretaries of the county societies, but all essentially the same. That to our own members dwelling also on the fight for coroner. The letter to officers was as follows:

#### TAZEWELL COUNTY MEDICAL SOCIETY

Pekin, Illinois, Aug. 24, 1916.

"Dear Doctor:

"To one who has watched the trend of the times it is definitely apparent that there is a well defined movement on foot, all over the United States, to impose many limitations on the practice of medicine. It is time that medical men protest and show to the public the unfairness and dangerous tendencies of such legislation, otherwise a large number of laws are sure to appear on the statute books in the near future the purport of which will be to impair the usefulness of the practitioner and impose hardships and dangers upon the sick and suffering.

"Unfortunately medical men do not concern themselves sufficiently with legislative matters even when their own rights and interests are involved."

The above extract from an editorial in the August ILLINOIS MEDICAL JOURNAL should set us all to thinking—if we have not already thought of these things.

Can we do any less than to be sure that the men who are sent to the legislature from our district—the 30th—will pay more attention to the voice of organized medicine than they will to organized commercialism, fakery, quackery, or sectarianism?

This committee desires to work in conjunction with officers or committees from the other counties of this district. We wish information regarding prospective state senators and representatives, and in return will give you what information we have.

Will you please try to make your members see that it really does make a difference what kind of men we send to Springfield—and that the real election is in the primary?

The candidates are: \* \* \*

Doctor, this letter calls for an answer, if for noth-

ing else, to tell us you are with us. We will agree to keep the Tazewell County physicians posted and enthused. Will you do the same for your county? Would you consider a meeting of officers of or committees from the county societies in this district to be held in Pekin about September 1? Will you write your members a letter like this, only better?

Fraternally yours,

E. F. KELCHNER, *Chairman.*

H. V. BAILEY,

F. C. GALE, *Secretary,*  
*Committee.*

At the same time we wrote each of the fourteen candidates as follows:

#### TAZEWELL COUNTY MEDICAL SOCIETY

Pekin, Illinois, Aug. 23, 1916.

*Dear Sir:* It would be gratifying to the physicians of this district if you should see your way clear to sign the following declaration.

If you have any hesitancy in signing, I would suggest that you consult the leading physicians of your home town.

If you will kindly either sign the attached and return to me, or if you will let me know your objections to signing same, you will greatly oblige us.

Very truly yours,

*Secretary.*

I believe that in legislation on matters of Public Health, Sanitation, and on matters pertaining to the practice of Medicine and Surgery, that the medical profession is more apt to be able to furnish the correct solutions of the problems involved than the laity. Furthermore, if nominated and elected to the office to which I aspire, I will give most careful consideration to, and be largely guided by, the requests and suggestions made by the representatives of the Medical Societies, on the matter above mentioned.

Date..... Sign here.....

One of our home doctors who saw this letter and declaration before it was mailed said we had a lot of nerve to ask that bunch to sign anything of that sort. I asked who had a better right to have nerve than the fifty doctors in Tazewell County, and the 187 doctors in the 30th district. He opined that none would sign, but the results were given in our final report mailed to the faithful 187 before the primary, as follows:

#### TAZEWELL COUNTY MEDICAL SOCIETY

Pekin, Illinois, September 2, 1916.

*Dear Doctor:* On August 23d, this Committee submitted to each prospective candidate for State Senator and Representative in this district, the following declaration, with the invitation to sign and return to us:

"I believe that in legislation on matters of Public Health, Sanitation, and on matters pertaining to the

practice of Medicine and Surgery, that the medical profession is more apt to be able to furnish the correct solutions of the problems involved than the laity. Furthermore, if nominated and elected to the office to which I aspire, I will give most careful consideration to, and be largely guided by the requests and suggestions made by the representatives of the Medical Societies on the matters above mentioned:

Date..... Sign here....."

As a result, 9 of the 14 candidates signed, and 5 did not. Of those who did not sign, 2 ignored us entirely and 3 wrote, making a bid for our support, but sidestepped the issue.

The following signed: \* \* \*

Doctor, paste this list in your hat, as these men are certainly entitled to our support. As long as our profession can be ignored, or as long as we are used simply as trading stock on the floors of our legislative halls, nefarious legislation will continue. The sooner all of our legislators learn that it is no disgrace to work with us as humanitarians the better for all concerned.

Don't forget that the real election is at the Primary.

Dr. Sam. T. Latham, of Eldorado, wants to be Lieutenant-Governor, so it is up to the Republicans among us to give him a boost.

Fraternally yours,

E. F. KELCHNER,

H. V. BAILEY,

F. C. GALE,

*Committee.*

The primary results showed that all who were nominated had signed. Consequently only those who signed could be elected. How well they will serve us remains to be seen, but we have our eyes on them.

In conclusion, proper organization of legislative affairs in the county society begins before election. And the real election takes place at the primary.

#### DISCUSSION.

Dr. Fiegenbaum of Edwardsville considered the paper very pertinent, the first paper of this kind that he ever heard in a Medical Society; not but what our defects have been paraded before us many times, but the former papers have always omitted or sidestepped the remedy.

Dr. Gale said many members of country societies were walking around on the face of the earth dead but did not know it. That is true, but in proportion there are just as many dead secretaries walking around. The secretary's office in the majority of the societies of this state is a bouquet that is thrown to somebody that is sitting around at the time of the annual election. If he doesn't decline outright he takes it and says, "Well, it's only for a year and er—



er—I will get over it somehow.” Mark my words, you get no benefit from that kind of a secretary.

Your secretary must be a live man, he must be a man who has the interest of the profession at heart and who does everything he can in season and out of season to promote the interests of the profession. Just what the doctor has outlined can be done in every county society in the state of Illinois, and if it were done, we would have an entirely different song to sing when it comes to the legislature.

Down in our county, our Senator and our three Representatives know full well that there is a Madison County Medical Society, and they pay attention to what we have to say. They pay attention to our requests but not alone that. Time was when our Representative would say to us, “I have had a hundred and fifty letters from osteopaths asking me to vote for the Osteopathic Bill and I have had three letters from the doctors of my district. In fact, I didn’t know that I had any doctors in my district at all.”

When we were threatened with an Osteopathic Bill at the last meeting of the Legislature only a few weeks ago, our Representatives and our Senator were perfectly flooded with letters from our county asking them for their support and telling them what we wanted. When the question of Health Insurance came up and we were afraid that some measure would be introduced, the question came up in our society, at the request of the Legislative Committee, to send a committee up to Springfield if that measure should be introduced. Fifteen men of our society volunteered to leave their work, however busy they were, and go to Springfield at the order of our State Legislative Committee, and do what they could.

If you have that kind of a spirit in your county society, that will take an interest in what is proceeding in the Legislature at the proper time, why we will have no complaint to make. If we do not get what is coming to us, it is our own fault.

Dr. Deal states that Dr. Gale had a wonderful organization and did a wonderful lot of work. Mr. Deiterich of Beardstown was on the sub-committee and he did a remarkable lot of work and was the strongest man we had by far.

Dr. Deal wrote as many as fifteen or twenty letters to a county and did not hear from one of them.

Osteopaths every week will call on their Representatives and Senator—two, three, four and five of them, every single week. Maybe they travel fifty miles to do it, but they will do it.

Over twenty-five bills were introduced this year that directly affected the medical profession. If Representative Jacobson’s bill had gone through as introduced, you couldn’t have touched the hand or the foot; a manicurist couldn’t have trimmed a nail, a doctor couldn’t have treated gout or syphilis of the hand or foot. Osteopaths would have had the same privilege to practice medicine as you have. They do it anyway now, illegally, so what’s the use? They

don’t do it to the extent they would if they could do it legally.

Social Insurance would have socialized the whole medical profession. Everybody, even self-employed people, would have had to take it.

Now the dentists have a bill up. You can’t legally take care of a fractured jaw at present. You can pull a tooth legally, but that is all. The dentists are introducing a new dental practice act where they won’t allow the doctors to even pull a tooth. We are going to fight that.

Dr. Gale: In regard to the possibility or the advisability of making a ready writer of letters out of the ordinary practitioner of medicine—it will never be done, and my idea of approaching the subject from the angle which I did is to relieve the doctor of the necessity of writing all of those letters. If a bill comes up affecting the unions, they don’t expect every union man to write a letter to the legislators or to send a committee down there. The union man knows he is represented by a committee and more than that, the legislators know that the union man is represented by a committee and it is up to the individual doctor to get the legislators and would-be legislators to know that they are represented by committees because the individual doctor isn’t going to keep track of all these bills being brought up constantly. It has to be put in committee form and the legislators must know that the doctors are represented and officially represented by the committees which appear before them at Springfield.

### SYPHILIS AMONG ADMISSIONS TO ELGIN STATE HOSPITAL.\*

EGBERT W. FELL, M. D.,

Physician, Elgin State Hospital  
ELGIN, ILL.

In considering a mental case the matter of first importance is whether or no the individual is syphilitic. That question being determined in the affirmative does not necessarily mean that he is suffering from a syphilitic psychosis but a luetic infection being excluded paresis can be left out of consideration. Venereal histories are notoriously hard to get and unreliable when obtained and in state hospital work somatic syphilitic lesions are quite uncommon. There is a superficial analogy in this respect to the infrequency of atrophic cirrhosis among alcoholics who are committed to state hospitals. It seems that in cases coming to us the poison has for some reason exerted its influence on the nerve tissue to the exclusion of systemic involvement.

The Wassermann test is our most reliable criterion for the existence of lues; while a nega-

\*Read at the Sixty-seventh Annual Meeting of the Illinois State Medical Society, May 9, 1917.

tive finding is not conclusive evidence of the absence of syphilis, for practical purposes a positive result can be regarded as indicating that the individual is infected with the spirochete. Many cases come to us in which on account of excitement or for other reasons, an adequate physical examination cannot be made and where it is possible the diagnosis is not infrequently, especially in organic cases, in doubt. For this reason we have come to depend a great deal in our diagnostic work on the Wassermann reaction and consider the one important laboratory test that should be made in every case to be the serum Wassermann reaction. This has for some time past been a routine measure at Elgin and while its primary object was to help establish or exclude paresis, a number of other more or less interesting points were observed which I will endeavor to bring out.

The Elgin State Hospital draws its population from the northern counties of the state, but a very large per cent. of its intake is from Chicago, these cases not being selected either as to their social status or place of residence in Chicago. For that reason our results are not an index of the frequency of syphilis in a metropolitan district nor in a rural district, but rather a combination of the two. The figures from Dunning would give a better idea of the incidence of syphilis in Chicago, those from Anna or Jacksonville in a rural district.

This paper is based on a study of the last 1,700 admissions, re-admissions and re-commitments being excluded. In addition to the serum Wassermann test, it is the custom to examine the spinal fluid by this as well as by other tests in all cases where paresis is suspected and in all having a positive Wassermann on the blood, in this way getting as nearly accurate an estimate of the number of syphilitics as is possible with the complement fixation test. The Noguchi modification of the Wassermann technique is used and I feel that the results obtained have been fairly accurate because the laboratory findings agree quite closely with the clinical diagnoses of paresis; positive fluids are not obtained in non-paretics and are obtained in a very high per cent. of paretics (96-per cent.), also the per cent. of positive sera in paresis is as high as that given by most authorities.

In admissions as a whole, 16 per cent. had positive Wassermann; of males, about 22 per

cent.; of females, about 9.5 per cent. This difference in the sexes is accounted for by the fact that paresis is much more frequent among males than among females, forming 19 per cent. of male and only 5.5 per cent. of female admissions. Excluding paresis and the other purely syphilitic psychoses, the number of male and female in this series is about equal. About 12 per cent. of our admissions then are here because of having had a syphilis which had not been adequately treated in the early stages. Besides these, incidental syphilis is found in about 5 per cent. of admissions, in males somewhat more frequently than in females. These are spoken of as being incidentally syphilitic because there is no evidence that the infection has played any part in the development of their mental disease. Whether or no a man is to become insane plays no part in his liability to contract syphilis, neither does his being syphilitic make him more liable to become insane, excluding, of course, the purely syphilitic psychoses.

In the large groups of mental disorders no marked variation in the per cent. of syphilitics was noted. Dementia præcox forming a quite large proportion of our intake, showed a relatively low per cent. which one would expect from the frequent early age of onset of this disease and the retiring disposition of its victims. The per cent. positive in cases of acute mania was not larger than the average. In acute excitements coming on in males after the age of thirty, the Wassermann reaction is especially helpful in excluding paresis. Considerable importance is attributed to syphilis in the development of arteriosclerosis, but a positive Wassermann was found only once in fifty arteriosclerotic demented. Of chronic alcoholics the males had about the same proportion syphilitic as in the other psychoses, but of the female alcoholics about one-third were syphilitic. Of 69 morphin addicts, nearly 25 per cent. were syphilitic, males and females about equally frequent. Dividing the non-syphilitic psychoses into those having a definite organic basis and those of an entirely functional nature, it was found that they showed no material difference in the frequency of syphilis (organic group, 4+ per cent.; functional group, 5— per cent.).

The children of a paretic being the children of a syphilitic, an effort should be and has been made here to examine whenever possible the



families of these patients. The work in this line is not of sufficient extent to draw any definite conclusions as to the frequency of this sort of infection, but we have found positive Wassermanns not infrequently in the wives and children of paretics. This finding has been so frequently made by others that it is now recognized as being one of the most important phases of the syphilis question. The examination of these persons is of special importance in view of the question as to whether the spirochete causing paresis is not a distinct strain. The occurrence of conjugal paresis, of paresis or tabes in persons known to have been infected from the same source, of an unusual number of cases of paresis or tabes in a community at about the same time, all tend to lend strength to this contention.

It has been determined by Wile and Stokes and others that the central nervous system is involved in the early stages in all or at least in a very large per cent. of syphilitics. At this time the tissues are sensitized and years later when there is an acute flare-up in the process the sensitized tissues react out of all proportion to the number of spirochetes present. If non-regenerating nerve cells and fibres are involved, the parenchymatous or central type of syphilis results (paresis, tabes, primary optic atrophy), if blood vessels and connective tissues are affected the interstitial or meningo-vascular type (gumma, arteritis, all cases usually spoken of as cerebro-spinal syphilis), the only difference being in the kind of tissue involved. Whether the kind of tissue attacked depends on an individual susceptibility or on a difference in virulence or a special strain of spirochete is not known.

In the parenchymatous type of nervous syphilis the affected tissues are not capable of repair and for some reason no form of medication with which we are familiar seems able to penetrate deeply enough to reach the spirochete. Our experience at Elgin with bichloride, salvarsan and neo-salvarsan by both the Swift-Ellis and intravenous methods has convinced us that these drugs are of little value in the treatment of paresis. Twelve per cent. of our admissions then are suffering hopelessly from a disease the cause and mechanism of which are quite well understood, their only chance for help being in the fact that it is not always possible either clinically or by laboratory tests to say definitely that a case is one of paresis

and not of cerebral syphilitic arteritis. For this reason it is advocated that all paretics be treated intensively with mercury and neo-salvarsan. If, as Bassoe thinks, such treatment hastens degeneration in some cases of genuine paresis, nothing is lost and there is the chance that meningo-vascular lesions may be improved. Before very much can be accomplished a more efficient therapeutic agent will have to be available.

I know of no reason why the per cent. of syphilitics among admissions to a state hospital should differ materially from that of the adult population at large. It is certainly a much fairer index than figures from the army, dispensary clinics or any other selected group for all walks of life are represented except the very rich. Our figures agree quite closely with those from some other institutions and are lower than those given by many, but in applying them to the general population, considerable latitude should be allowed for variable factors. If it is true that approximately five per cent. of adults are syphilitics, it is easily seen what an enormous problem is presented. It has been estimated that from one to two per cent. of syphilitics become paretics and in the absence of an efficient therapeutic agent the only means of lowering the death rate from paresis is to lessen the number of syphilitics either by prophylaxis or by adequate treatment in the early stages.

#### SUMMARY.

Sixteen per cent of admissions to Elgin State Hospital are syphilitic, about 22 per cent. of males and 9.5 per cent. of females.

Paresis forms about 12 per cent. of the admission rate, 19 per cent. of males and 5.5 per cent. of females.

At the present time prophylaxis is our only effective means of combating paresis, no known drug or method of treatment being of any value.

Every case of paresis should, however, be treated intensively with mercury and neo-salvarsan because the coexistence and extent of meningo-vascular lesions cannot be determined absolutely by any clinical or laboratory means.

Excluding the purely syphilitic psychoses, about five per cent. of admissions are syphilitic, men somewhat more frequently than women. There is no evidence in these cases that the infection has anything to do with the mental trouble.

There is reason to believe that the per cent. of syphilis in the general adult population is approximately the same as the per cent. of incidental syphilis in the intake of a large state hospital.

## STUDIES IN MENINGITIS.

### *Pneumococcus Meningitis.\**

A. LEVINSON, B. S. M. D.

Instructor in Pediatrics, University of Illinois Medical School; Associate Pediatrician, Sarah Morris Hospital for Children of the Michael Reese Hospital; Attending Pediatrician, West Side Jewish Aid Dispensary.

CHICAGO.

I should like to present to you some of my observations made in connection with meningitis. However, because of the limited time allotted I shall not even attempt to touch on the larger field of investigation on which I have been working for some time—the pathogenesis of the different types of meningitis, but shall restrict myself principally to certain aspects of one form of meningitis, namely the pneumococcic type.

There is an opinion prevalent in literature that pneumococcus meningitis is a rare condition. I should like to state at the outset, however, that although pneumococcus meningitis does not occur as frequently as the epidemic form, it is by no means so rare a disease as it is credited with being. I gathered 102 reports of scattered cases of this disease from literature. During the past two years I examined different specimens of the spinal fluid of 17 cases of pneumococcus meningitis, 15 of which I followed up clinically. For obvious reasons I am unable to give detailed histories of these cases. It is my purpose, however, to present to you some of the observations I made which appear to be of interest clinically.

From a study of my own cases and those quoted in literature, I came to the conclusion that pneumococcus meningitis is not a disease of most infrequent occurrence. Furthermore, I found that the impression given by many authorities, that pneumococcus meningitis is nearly always immediately preceded by pneumonia or pleuropneumonia, is not borne out in practice.

The disease may and usually does follow a middle ear infection. Of course, since so many infants with pneumonia also suffer from an otitis media, meningitis may be said to follow pneu-

monia, although it does not follow directly, as otitis media is the intermediate stage. I believe that while the term otitic meningitis as applied by the older authors is not correct, it is true, nevertheless, that the common forms of meningitis following ear infection are either pneumococcic or streptococcic in origin, with a predilection for the pneumococcic type.

Pathologically, pneumococcus meningitis differs from the meningococcus or streptococcus form only in a few particulars. The exudate, which is thick, contains more fibrin than the epidemic variety. The great amount of fibrin which shows itself in most pneumococcic infections manifests itself also in pneumococcus meningitis. This point, as will be noted later, may be made use of in diagnosis. The exudate accumulates both at the base and at the convexity of the brain, with a slight preponderance at the convexity. Histologically, the connective tissue of the pia shows an infiltration of pus cells and small round cells. The blood vessels are engorged, the brain substance may or may not be degenerated, depending on the severity of the disease. As a rule, only the very uppermost layer of the brain is affected. The spinal meninges which are also congested show an infiltration of cells, but they are not generally as extensively affected as in other suppurative forms of meningitis.

The clinical picture presented is that of any other form of meningitis. However, as compared with meningococcus meningitis, the pneumococcic form is not so sudden in its onset. The epidemic form usually sets in very violently with no apparent cause, whereas in pneumococcus meningitis a middle ear infection is generally the rule, the fever being continuous from beginning of the infection, and the meningitis manifesting itself principally by the symptoms of meningeal irritation. Headache, which is one of the most marked symptoms, may be limited to only a part of the skull, generally over the convexity, due to the fact that there is usually a greater collection of pus in that region. The observation made that rigidity of the neck is not so marked in this type of meningitis as in epidemic is correct in a certain number of cases. (I shall in a forthcoming paper give a standard for the rigidity of the neck and its variation in different diseases.) The temperature is continuous and high unless affected by treatment. The disease usually terminates

\*Read at the sixty-seventh annual meeting of the Illinois Medical Society at Bloomington, May 9, 1917.



fatally after a duration of from two to fourteen days.

The spinal fluid of pneumococcus meningitis, I found to vary from other forms of suppurative meningitis, even in its physical appearance. As outlined elsewhere I found the color of the fluid in pneumococcus meningitis to be pearly gray as contrasted with the greenish yellow tinge of the fluid of the epidemic form. The amount of fibrin in the sediment of pneumococcic fluid is greater than that found in the epidemic type, which for a time gives only a spiderweb pellicle or sulphur-like granules gathered at the side of the tube. I wish to point out here that in order to note the increased amount of fibrin in pneumococcic fluid or in any other meningitic fluid it is necessary that the fluid be examined soon after withdrawal from the body as the fibrin undergoes autodigestion on standing. The pressure of the fluid is very high, a characteristic in which it does not differ from the epidemic variety. The cells in the fluid are numerous and 98 to 100 per cent. of them are polymorphonuclear leucocytes. The cells must also be examined soon after withdrawal, otherwise they degenerate. One of the striking characteristics I noted in the examination of the fluid of pneumococcic meningitis, was that the bacteria (gram positive) are very numerous in the direct smear, differing markedly in this respect from the occasional bacteria of the smear of the meningococcus type. At times there are only a few cells in the direct smear of pneumococcus meningitis, with hundreds of organisms on the slide resembling a pure culture. The bacteria are very often arranged in chains of four or six, thus making it very hard to differentiate it from streptococcus. Pneumococcus grows very easily in culture, much more luxuriantly than meningococcus. The globulin tests are all markedly positive.

The alkalinity of the spinal fluid of pneumococcus meningitis, as determined by titration with methyl red, is less than that of normal spinal fluid. The true hydrogen ion concentration is higher than in normal, as I shall attempt to show in my forthcoming paper on *The Hydrogen Ion Concentration of Spinal Fluid*.

The diagnosis of the presence of meningitis is not very difficult to make, the diagnosis being made on the presence of classical meningeal symptoms. The differential diagnosis between

the different types of meningitis, especially between epidemic and pneumococcus forms is not so easy to make. The history of the case is of some assistance in this particular, epidemic giving no preceding history of infection, whereas the pneumococcus usually gives a history of middle ear infection. The physical characteristics, as mentioned above, are also helpful in diagnosis. Agglutination will often differentiate meningococcus from pneumococcus. The most important differential point is, of course, the gram stain, meningococci being gram negative and pneumococci being gram positive. Yet at times all of these characteristics put together are not sufficient to make a positive diagnosis. The length of time the slide is stained, and the decolorizing agents used often interfere in the differentiation of the two organisms. Because of these difficulties one needs to exercise the greatest care in staining the sediments of spinal fluid, as the differentiation between meningococcus and pneumococcus may mean life or death to the patient. If a meningococcus should ever be pronounced pneumococcus and therefore no serum be given, the result is self-evident. The great preponderance of bacteria in the direct smear and the ease with which the bacteria grow on ordinary media are points to bear in mind in making a diagnosis.

Differential diagnosis between pneumococcus and streptococcus meningitis is an even more difficult matter. The temperature of the two usually differs, the pneumococcus generally giving a continuous high temperature, whereas the streptococcus produces a hectic temperature. Yet this is not always the case. Of greatest importance in the differential diagnosis is the bacteriologic examination, although as mentioned previously pneumococcus may be arranged in chains, a matter that makes differentiation very difficult. The staining of the capsule is not always possible in pneumococcus found in spinal fluid.

The prognosis in cases of pneumococcus meningitis is usually fatal, although not invariably so. In the cases that came under my observation, there was one recovery. Out of 102 cases reported in literature, there were 21 recoveries. The fact that pneumococcus meningitis is not always fatal should make us realize the importance of both prophylaxis and treatment in this disease. In all pneumonias, and in all cases of

grippe in infancy an ear examination should be made. I believe that a paracentesis done early will prevent many a pneumococcus meningitis. When convulsions or other symptoms of meningeal irritation set in, during the course of otitis media, a spinal puncture should be done. This procedure besides serving as a diagnostic measure relieves pressure and it may even have a curative value.

As to treatment, I believe that no disease is too fatal for treatment, especially so is this disease, where cases of recovery have been reported. As to what is the best method of treatment in pneumococcus meningitis is a matter that is still to be settled. I would, however, speak strongly in favor of repeated lumbar punctures and the injection of anti-meningitis serum, or even ordinary horse serum, if the other is unobtainable, into the spinal canal. Optochin should be given a trial, if it can be procured. This drug, however, is off the market at present. Besides, I would need to see more than one case of recovery treated with this drug, before I should be willing to endorse it unequivocally. As to operative treatment, if applied very early in the course of the disease, it may have a beneficial effect through the draining of the pus, but it is generally attempted too late for a successful operation on the brain. Furthermore, lumbar punctures answer the question of pus drainage, if done repeatedly.

#### SUMMARY

1. Pneumococcus meningitis is not a rare disease.

2. It usually follows a middle ear infection, which in turn is very often a result of a pneumonia.

3. The exudate is mainly fibrinous in character and is concentrated about the base and convexity of the brain.

4. Rigidity of the neck is frequently not so marked as in cases of meningococcus meningitis. All other meningeal symptoms are the same as in any other form of meningitis.

5. The spinal fluid in pneumococcus meningitis is fairly characteristic:

(a) It is pearly gray in appearance.

(b) On standing one-half to one hour it gives a large amount of fibrin; greater in quantity than that given off in epidemic meningitis. (The fibrin must be examined the same day.)

(c) The cells are usually numerous and consist principally of polymorphonuclear leucocytes.

(d) Gram positive bacteria (pneumococcus) are much more numerous in the direct smear than are the meningococcus in the sediment of fluid from the epidemic variety.

6. The prognosis is usually fatal. However, in 102 cases from literature 21 cases of recovery were reported. The author saw one recovery in 17 cases observed.

7. As a prophylactic measure, all ears in cases of pneumonia should be examined and when bulging is evident an incision should be made.

8. The treatment should consist of repeated lumbar punctures and intraspinal injection of serum, either antimeningitic or normal horse serum.

30 N. Michigan Boulevard.

#### WHY DO WE HAVE RECURRENCES AFTER OPERATIONS ON THE BILIARY TRACT?\*

DANIEL N. EISENDRATH, A. B., M. D.  
CHICAGO.

Every surgeon who has performed a large number of operations upon the gallbladder and bile ducts and who has been consulted by patients operated upon by himself and by other surgeons on account of recurrences, will agree, I believe, with the statement that our results in this field of surgery are not as satisfactory at the present time as we could wish them to be. Follow up statistics as a rule show a wide discrepancy between the number of cases operated upon and those who have reported or have been examined as to their postoperative condition. The average of replies plus the number of patients who respond in person averages from 30 to 40 per cent. It would be unfair to draw any conclusions from such a minority because in the "silent" patients, the number of recurrences may be so large as to lull one into a sense of unjustified satisfaction. A few recent writers like Buchanan<sup>1</sup> and French<sup>2</sup> report a larger percentage of cases in which they were able to follow up their results, but these are exceptions. In 1916 Deaver<sup>3</sup> published what I consider to be one of

\*Read before the Rock Island County Medical Society, August 14, 1917.

1. Surg. Gyn. and Obst., 1915, xxi, 499.

2. Boston Med. and Surg. Jour., 1917, clxxvii, 151.

3. Illinois Med. Jour., 1916, xxix, 429.



the most valuable contributions to this subject, when he analyzed 42 cases in which he had operated for recurrence following operations on the biliary tract. This method of reporting actual operations for recurrence, will, I believe, be of far more value to us in the near future than any of the follow-up systems, unless we can obtain a much larger percentage of replies than is the case in the majority of such inquiries. A number of our patients consult other surgeons when they have recurrences and are perhaps unjustly angry with us and do not reply to our follow-up inquiries. Again, I have operated upon cases, originally operated on by other surgeons, in which the gallbladder had been simply drained and cases considered as cured, but the recurrences took place ten to fifteen years after the original operation. The causes of recurrences after operations on the biliary tract are to a great extent within the control of the surgeon as well as of the medical man who refers the case to him, but in a certain degree they are uncontrollable. By the controllable factors I mean that our medical friends are very apt to send these cases for operation when the infection has caused such changes, not only in the gallbladder wall itself, but also in the entire biliary tract, that simple drainage or even removal of the gallbladder even when combined with drainage of the common duct does not suffice to enable one to gain the upper hand over an infection which has extended into the hundreds of radicles of the bile ducts lying within the liver itself. I shall discuss these controllable factors in detail later.

Amongst the uncontrollable causes the most striking analogy is found in calculous disease of the kidney. We are beginning to find that in about 15 to 20 per cent. of the cases in which we have removed a calculus from the kidney, one or more calculi reform. This is due to a combination of infection plus a change in metabolism which favors the deposit of crystalline substances around a bacterial nucleus. Experience has taught the surgeon to be guarded in his prognosis in such cases and the tendency is to do a primary nephrectomy whenever destruction due to the presence of the calculi is sufficiently advanced to lead the surgeon to fear recurrence after simple pyelotomy or nephrolithotomy. Conditions in the biliary tract are only different anatomically. We have only one liver instead of paired organs to

deal with, and although we may have removed the gallbladder and cystic duct or even removed calculi and drained the common and hepatic ducts, yet there is this uncontrollable factor of infection plus deposit of crystalline material which continues to take place in the remaining bile passages. Such a condition gives rise to symptoms of cholangitis, *i.e.*, infection of the intrahepatic bile passages. Bruning has recently called attention to the fact that a cholangitis can cause the same symptoms (chills, fever, sweats,

*Relation of Lymphatics of gallbladder draining into those of pancreas.*

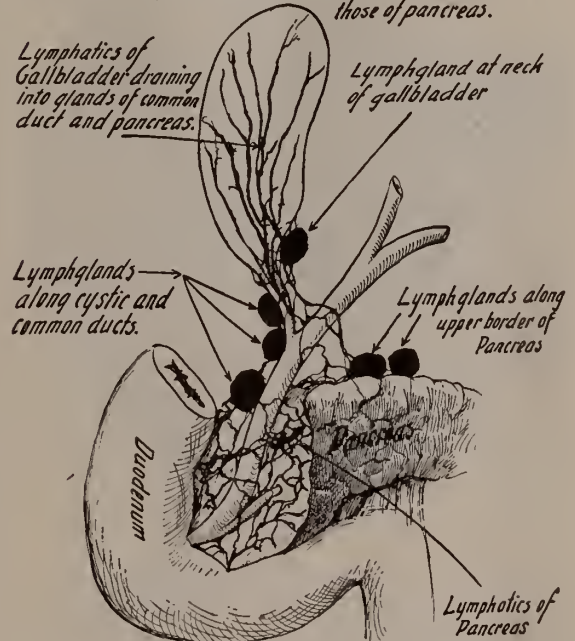


Fig. 1. Relation of lymphatics of gallbladder and common duct to those of pancreas.

icterus, etc.) even though no calculi be formed.

When we reflect upon the intimate relation between the lymphatics of the lower bile tract and the pancreas (Fig. 1) we can readily see that this added factor of pancreatic lymphangitis resulting in a chronic pancreatitis, is another uncontrollable factor which explains a certain percentage of our unsatisfactory results, because the indurated enlarged pancreas obstructs the common bile duct (Fig. 2).

There are certain general causes which favor recurrence after operations on the biliary tract and one of the first of these is the lack of knowledge on the part of many who perform gallbladder operations of the true nature of biliary infection. The impression unfortunately

exists both in the minds of the laity and of many surgeons that only when calculi are found has the operation been one which was indicated. The work of Rosenow<sup>4</sup> has clearly demonstrated that infection can take place by the hematogenous route, the bacteria localizing in the wall of the

there is concomitant infection of the entire biliary tract and that when symptoms of cholangitis such as chills, fever, etc., are present, the intrahepatic bile passages need drainage just as much as does the gallbladder, and removal of the latter alone does not suffice.

A second general cause of recurrence has been referred to by the writer in recent articles.<sup>7</sup> In these attention was directed to the fact that we are very apt to overlook calculi lying in the common and hepatic ducts because we are usually content with simply palpating that portion of the common duct which lies above the duodenum (Fig. 2) and when we can not feel any calculi here we feel satisfied that none are present in the common duct. I mean that the average surgeon, even one of considerable experience, at the present time is satisfied when he drains a gallbladder and removes calculi contained therein or even when he extends his indication so as to remove a gallbladder showing evidences of chronic cholecystitis. As a rule the surgeon feels that his task is completed unless there have been symptoms present such as icterus which have been hitherto considered as especially characteristic of stones in the common or hepatic ducts. In one of the articles referred to, I have called attention to a fact which was first observed by Kehr,<sup>8</sup> later by Bruning,<sup>9</sup> and has been observed also by Moynihan,<sup>10</sup> Van Beuren<sup>11</sup> and myself,<sup>12</sup> viz. that in about 20 per cent. of the cases of common duct calculi symptoms such as jaundice, fever, chills,



Fig. 2. Relation of common duct to head of pancreas.

gallbladder. Aschoff<sup>5</sup> and Ehrhardt<sup>6</sup> have demonstrated by the examination of thousands of gallbladders removed at operation, that after simple drainage the infection may recur because it persists within structures known as the crypts of Luschka which are clefts lined with epithelium extending out to the serous coat of the organ (Fig. 3). Calculi may even form in these structures and be expelled from time to time into the lumen of the organ to act as nuclei for larger calculi and this may explain cases where hundreds of calculi are found at secondary operations.

If we wish to have more satisfactory results every surgeon must familiarize himself with the pathology not only of infection as it involves the gallbladder walls, but also with the fact that



Fig. 3. Section of gallbladder showing stratified cholesterol calculi forming in the dilated cryptus of Luschka (Aschoff).

4. J. Infect. Dis., XIX, 527, Oct., 1916.

5. Die Cholelithiasis, Jena, 1909, and also numerous references in Riese's article in Ergebnisse zur Chirurgie und Orthopedie, Vol. VII, 1913.

6. Archiv. f. klin. Chir., LXXXIII, 118, 1907.

7. "Overlooked Common Duct Stones," Journal A. M. A., 1917, LXVIII, 968; "The Silent Common Duct Stone," Medicine and Surgery, 1917, I, 5, 507; Surgical Clinics of Chicago, I, No. 3, August, 1917.

8. Archiv. für klin. Chir., 1912, 97, 301.

9. Deutsche med. Woch., 1912, 33.

10. Text Book on Gallstones, 1904.

11. Med. and Surg. Reports Roosevelt Hosp., N. Y., 1915.

12. Journal A. M. A., 1917, 68, 968.



acholic stools, are absent, which have always been regarded as absolutely pathognomonic of calculi in this location are absent. During a recent conversation with an eminent internist, he spoke of a case in which he had felt positive that common duct calculi were present, but the surgeon reported that palpation was negative. The internist insisted on an exploration of the common duct and three calculi were found. This occurred in the practice of one of our most prominent surgeons and was due to the fact that calculi lying in the retroduodenal and intrahepatic portions of the common duct (Fig. 2) are very difficult to palpate because one must feel them through the intact wall of the duodenum and the substance of the pancreas.<sup>13</sup> In my article on "Overlooked Common Duct Calculi" and a more recent one,<sup>14</sup> I have reported three cases which had been previously operated upon by others where palpation had been negative at the first operation and in which I found calculi at the second operations which had been overlooked at the first. In other words I wish to make a plea not for bold and irrational intervention, but for at least a consideration of the possibility of the presence of calculi in the common duct (a) when many calculi are present in the gallbladder; (b) when the common duct is thick walled and dilated; (c) when there are symptoms of cholangitis in the form of icterus, chills, etc.; and (d) when the pancreas is markedly hard and indurated, even though palpation of the common duct is negative. Kehr<sup>15</sup> found calculi under these circumstances in 46 per cent. of 36 cases in which palpation of the common duct was negative.

I have just referred to two causes of recurrence which are controllable viz: (a) a lack of knowledge of biliary infection; (b) overlooking calculi in the common and hepatic ducts because the surgeon is too often content with palpation of supra-duodenal portion of the common duct or is still under the impression that icterus must be present in every case of common or hepatic duct calculi. The more specific causes of recurrence after operations on the biliary tract may be divided into true and false. Some of these as I have stated above, are controllable while others are not.

The causes of true recurrence are:

1. Reformation of calculi in the gallbladder (a) due to recurrence or persistence of infection, and (b) due to reformation of calculi (Fig. 3) in the crypts of Luschka.
2. Reformation of calculi in the common, hepatic or intrahepatic ducts as the result of recurrence or persistence of infection.
3. Reformation of calculus in stump of cystic duct.
4. Reformation of calculus around silk ligature.

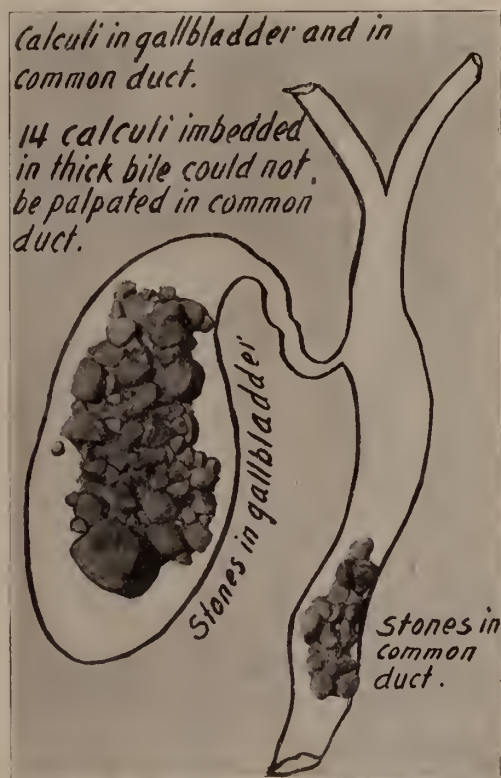


Fig. 4. Photograph of calculi removed from gallbladder and common duct in which the calculi in common duct lying in the supraduodenal portion of the duct could not be palpated. The common duct in this case was opened upon the indication of finding a great many small calculi in the gallbladder.

Of these, the last named does not occur at the present time, but there are reports of formation of calculi around ligatures or sutures of this material when it was employed for this purpose in the early days of gallstone surgery.

In the second group I believe that we can eliminate all except intrahepatic calculi, because all of the calculi found at secondary operations

13. Note: In 62% of individuals the common duct lies within the tissues of the head of the pancreas.

14. Surgical Clinics of Chicago, August, 1917.

15. Archiv. f. klin. Chir., 1912, 97, 301.

in the hepatic or common ducts are now believed to have been overlooked<sup>16</sup> at the primary operation and really belong under false recurrences.

It is impossible at the present time to express an opinion as to whether intrahepatic calculi when they give rise to recurrence symptoms belong to the true recurrences, *i. e.*, are newly formed as the result of recurrence or persistence of the original infection or are in reality present in such large number and so widely disseminated within the hundreds of intrahepatic bile ducts, that it is beyond human skill to wash them out

still in the early stages of evolution from the clinical standpoint, the only articles of importance being those of Beer and Lewisohn quoted in the article in which I have reported two cases.

#### CAUSES OF FALSE RECURRENCE.

The false recurrences are best divided as follows:

1. Calculi in the gallbladder, common, hepatic or intrahepatic bile ducts, which were overlooked or impossible to find (intrahepatic) at the previous operation.

2. Adhesions especially (a) to the abdominal wall such as occur after the older method of drainage of the gallbladder, in which the fundus was sutured to the parietal peritoneum, (b) to adhesions of the stomach or duodenum to the gallbladder after cholecystostomy or of the same viscera to the liver after cholecystectomy.

3. Chronic pancreatitis. The close lymphatic relation of the biliary tract to the pancreas is referred to under diagnosis later.

4. Carcinoma of head of pancreas. This may have been present but overlooked at the primary operation.

5. Persistence or recurrence of infection (a) in the gallbladder (especially frequent after simple drainage); (b) in the common, hepatic and intrahepatic bile ducts. In the last named the infection may persist or recur as a chronic catarrhal or even suppurative cholangitis.

6. New gallbladder formed in dilated stump of the cystic stump after cholecystectomy as reported by Floercken.<sup>17</sup>

7. Stricture of cystic, common or main hepatic ducts.

8. Internal or external biliary fistulae.

9. Contraction of the Ampulla of Vater.

10. Mistakes in diagnosis. The case may originally have been one of gastric or duodenal ulcer, hysteria, tabes with visceral crises or even a spinal tumor.

11. Pancreatic calculus.

I have attempted to enumerate the principal causes of recurrence because I believe that only by a frank and free publication by every surgeon

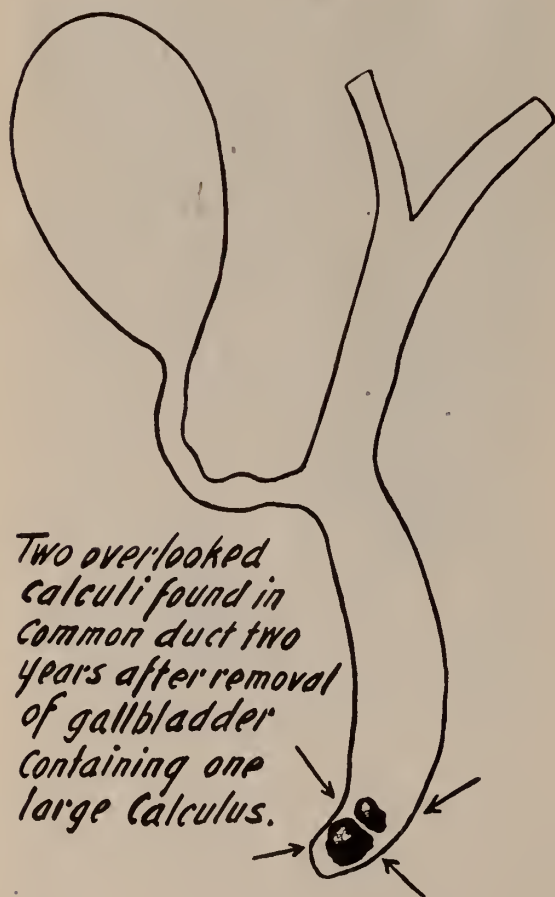


Fig. 5. Photograph of calculi from case in which the common duct was opened two years after a cholecystectomy had been performed. The principal symptoms were pain, moderate rise of temperature and slight icterus. Two calculi were found.

after even prolonged common duct drainage. The whole subject of intrahepatic cholelithiasis is

16. See article by author on "Overlooked Common Duct Stones" in Journal A. M. A., LXVIII, March 31, 1917.

17. Deut. Zeit. f. Chir., 1912, CXIII, 604.



of the conditions found at secondary operations will we be able to lessen the number of these.

When should we remove the gallbladder and when must one add to this step the opening and drainage of the common duct?

I would answer the first question as follows:

*First:* When the surgeon believes that the pathologic changes in the gallbladder are sufficiently advanced to justify the opinion that the organ is no longer able to perform its proper function. Such an indication is present when the gallbladder is thick and rigid and a great many small calculi were present at the time of operation. The former condition means such a high degree of inflammatory infiltration of the entire thickness of the gallbladder wall that it will be incapable of properly expelling the contents, which favors not only stagnation but the filling up of the ducts of Luschka with danger of true recurrence of calculi and the lighting up of infection as a secondary result. If many small calculi were present it is very easy to overlook them if imbedded in pockets between the many folds of mucous membrane which are found at the neck of the gallbladder and in the cystic duct itself.

*Second:* If an acute infection has supervened upon the chronic changes described under pathology the gallbladder should be removed if the patient is not septic and there are no contraindications in the shape of bad heart or kidneys. Even in the presence of extensive gangrene of the mucous membrane, I do not believe that it is advisable to leave the gallbladder, because it is a constant menace to the individual if not removed.

*Third:* If fistulae exist after a previous operation, especially if they are due to a stricture of the cystic duct, then cholecystectomy is certainly indicated.

*Fourth:* If there is a history of recurrent attacks of gallbladder infection even if calculi are not present but the gallbladder shows the changes described under the first indication, we are rendering the patient a far greater service by removal of the gallbladder.

We know today that calculi themselves unless they cause mechanical obstruction of the neck of the gallbladder or of the cystic, hepatic or common ducts do not require as much consideration as the infection itself. We can have just as marked clinical symptoms from an infection in

any portion of the biliary tract without calculi, as we see in those cases where calculi are present.

To answer the question in regard to when should we open the common duct, I can only reply that it is my own invariable practice to open the common duct for the purpose of searching for calculi in this and also in the hepatic ducts if one of the indications are present which were outlined above under the section on overlooked common duct calculi. By doing this, I have not increased my mortality and if the technic of opening the common duct, described elsewhere,<sup>17</sup> is followed, I feel certain that it will become a much easier operation than the majority of surgeons believe. When we recall the fact that one in five cases of common duct calculi do not show the symptoms hitherto considered characteristic and even indispensable to the diagnosis of calculi located in the common or hepatic ducts or both, we can readily see that a more thorough operation is necessary in the future. Deaver in a recent paper states that he has overlooked common duct stones in five of thirty-three cases of simple drainage and even in one case after removal of the gallbladder. Since finding common or hepatic duct calculi in three of my own cases either drained or cholecystectomized by other surgeons and furthermore since I have found common duct calculi in twelve out of thirty-six cases where I opened the common duct upon the indications given above, I have become convinced of the necessity for the addition of the common duct exploration with the necessity for the addition of the common duct exploration with subsequent drainage in many more cases than in the past.

In closing let me urge earlier and more thorough operations than we have done in the past. We have no method of preventing adhesions but we do possess the power to lessen the number of preventable recurrences by a study of the various causes as I have enumerated them above. This requires the co-operation of the physician and the surgeon. The sins of omission in overlooking calculi and in incomplete technic on the part of the surgeon must be eliminated and in turn the medical attendant must be taught that every recurrent attack of biliary infection leaves imprints upon these organs which even the surgeon cannot eradicate.

17. Kansas State Med. Jour., June, 1917.

## POSTOPERATIVE MENINGEAL HEMORRHAGE\*

G. W. GREEN, M. D., F. A. C. S., AND

J. J. MOORE, M. D., M. S.

From the Ravenswood Hospital and the Department of  
Experimental Medicine, University of Illinois

CHICAGO.

*Postoperative Meningeal Hemorrhage.*

It is a common quotation of Dr. A. J. Ochsner's that "The wise surgeon avoided complications." It is with this thought that we wish to discuss postoperative meningeal hemorrhage.

It is well realized that notwithstanding most rigid aseptic precautions, prevention of infection, and an almost perfect surgical technique, extensive operations upon the uterus for cancer or myoma result in fatal postoperative complications over which at present we appear to have little control. The more common of such conditions are shock, acute dilatation of the heart or stomach, injured kidney function<sup>1</sup> and hemorrhage in the various parts of the body. Busse<sup>2</sup> describes 14 cases of bleeding in the stomach or duodenum after operation, with a review of 82 similar cases collected from the literature. The mortality of these postoperative hemorrhages, varying from 21 to 72.5 per cent. in different series, indicates the gravity of prognosis.

A rarer cause of death and one upon which little is written is postoperative meningeal hemorrhage. Undoubtedly the principal reason for lack of knowledge upon this subject is failure to obtain and perform necropsies, many cases being mistaken for other pathological entities and certified to as such. Fairlie<sup>3</sup> reports two cases of cerebral hemorrhage associated with chloroform anesthesia. The first occurred in a young man aged 23 years following a third operation for grafting. Chloroform was used as the anesthetic. During the first stage there was considerable excitement and violent struggling followed in six minutes by unconsciousness with good breathing and pulse. After eight minutes, the patient was turned, the breathing suddenly became interrupted and gasping, and soon stopped. This was accompanied by dilatation of pupils, livid

pallor and almost imperceptible pulse. Artificial respiration and stimulants were immediately used but the cardiac impulse ceased. At the postmortem examination a fresh hemorrhage extending over both cerebral hemispheres, being more extensive over the left, was found. None of the other pathological findings was of particular significance.

In the second instance, which concerned a woman of 61 years, after five minutes of chloroform anesthesia respiration ceased and the pulse became weak. After seven minutes of artificial respiration, the natural respiration was resumed and the pulse improved. Ether was then tried but the patient, not doing well, was returned to bed. After three days there developed slowness in answering questions, gradual paralysis of the left arm and of the left side of the face, and unconsciousness. Consciousness returned the next day. She left the infirmary and further observations were not possible.

In such conditions it is often difficult to rule out the anesthetic as a factor causing the fatal issue. Baldwin<sup>4</sup> records two deaths following anesthesia, one after six hours and the other after thirteen hours. The second has some features resembling those in a case which we detail below. The patient had a hysterectomy for a supposed malignant disease. She appeared well for three-quarters of an hour after the operation when respiration suddenly ceased with loss of consciousness. After two hours of artificial respiration, voluntary respiration was resumed. The pulse rate was 140. Death occurred thirteen hours after the operation, when the pulse had risen to 170, the temperature to 104.4 F. There was no return to consciousness. There was no autopsy. The author believes that death resulted from temporary paralysis of the respiratory centers, followed by paralysis of the cardiac and temperature centers with no hemorrhages.

Unfortunately in but few of the sudden deaths following operations are necropsies performed, thus the cause of death is more or less a conjecture based upon clinical symptoms. Among such articles are those of Whitford<sup>5</sup> who ascribes a death following gastro-jejunostomy to cerebral hemorrhage.

\*Read at the meeting of the Chicago Medical Society, Jan. 31, 1917.

1. Bloodgood; J. A. M. A., 1913, DX 1737, Abst. Amer. Gyn. Proc.

2. Busse; Arch. f. klin. Chir., Langenbeck's, Berlin, 1905, Vol. LXXII ill.

3. Fairlie; Lancet, 1910, CLXXIX, 1415.

4. Baldwin; Cincinnati Lancet-Clinic, 1901, XL, 59.

5. Whiteford; Lancet, 1910, CLXXVIII, 367.



The history of postoperative hemorrhage which came under our observation as follows:

H. G., a trained nurse, single, aged 36 years, entered Ravenswood Hospital, Sept. 10, 1915. She was born in Sweden but had been a resident of this country for about eighteen years.

**Family History:** The patient was one of a family of four children, her two brothers and sisters all being alive and healthy. Her father died at the age of 66 from an accident, her mother is alive and well at the age of 77 years.

**Personal History:** She had pertussis in infancy and pneumonia at five years. During her early adult life and while in training she had frequent attacks of tonsillitis. She also had diseased teeth, having an abscess in one which required a year's treatment to heal. About twelve years ago she had her appendix removed, and about a year later had an attack of mastoiditis which recovered after operation. During the latter part of her training her hair fell out in patches. This became so conspicuous that she wore a wig for some time after graduating. From the time of graduation to the time of the operation she worked practically continuously.

Her menses commenced at the age of 16, were regular, about twenty-eight days. During recent years the flow was rather free but not enough to cause anemia.

**Present Complaint:** The patient noticed some two or three years ago that she had an abdominal tumor which caused a slight pain and that she tired more easily than usual. During the last year the tumor increased rapidly in size. An operation was advised. The patient had a premonition of death, having told a friend that she knew that she would not recover from the operation. But this worried her very little.

The leucocyte count the day before the operation was 10,900; the other blood findings were normal. The urine was normal although the specific gravity was only 1008 which was thought to be due to her abstinence from food the preceeding twenty-four hours. On entering the hospital her temperature was 98.2 F., pulse 104, respiration 22.

She had the ordinary preparation for the field of operation. The patient was placed upon the operating table at 8:40 a. m., and was returned to bed at 10:40 a. m., at which time her pulse was 88, respiration 20, condition good, and skin warm. The operation consisted of hysterectomy for a uterine fibroid weighing about ten pounds.

At 11:30 a. m. the patient was awake and quiet, her pulse being 80. Thirty minutes later she had a few sips of water and vomited it, her pulse still being 80, respiration 20. An hour after this her pulse had risen to 88. At this time she vomited some greenish fluid. At 2 p. m. she was restless and in great pain. At this time 800 c. c. of normal saline was given per rectum but it was not retained. At 4 p. m. she was slightly cyanotic and restless, pulse 96, temperature 102.2, respiration 24. A hypodermic of  $\frac{1}{8}$  gr. morphin sulphate was given. Thirty minutes after this

she became still more restless, cyanotic, irrational and unable to speak. A slight tremor was observed. The pulse rate continued to increase until 5:15 p. m., when it was 136, respiration 44 and shallow. The pulse reached 144 at 6 p. m., with respiration 48; one hour later the temperature was 104.6 F.

At 8:00 p. m. the patient was fully conscious. She was catheterized, 49 ounces being obtained. At 9:00 p. m. the rectal temperature was 104.6 F., pulse 132, respiration 48. The eyes were open. She was unconscious. She made no attempts to move her hands or feet. Her condition remained the same until 11:20 p. m., at which time she had her first convulsion. In the meantime she was given 1,500 c. c. of normal salt subcutaneously. Fifteen minutes following the first, she had a second very hard convulsion. The blood pressure after this was 110. The convulsions, varying in intensity, recurred at intervals of twenty to sixty minutes until 6:05 a. m., at which time the temperature was 105.8 F., pulse 140, respiration 44. At this time she had her 22d convulsion, the left pupil dilated and the right contracted.

At 6:13 a. m. she had her last (23d) convulsion; both pupils were dilated and did not react to light. There was complete paralysis of both arms and legs. Respirations ceased at 9:15 a. m.

A catheterized specimen of urine taken at 3:00 a. m. contained serum albumin three plus and epithelial, granular and hyaline casts in large numbers with a few red cells.

**Autopsy:** The body was that of a well developed female. No bruises or contusions were present on the head or trunk. There was a median incision of the abdomen extending from the umbilicus to the symphysis pubis of recent duration. The sutures of this were cut and a partial examination of the abdominal viscera was made. The body had been embalmed about ten hours.

The peritoneum was not inflamed. The uterus was absent. Along the line of suture of the recent operation, healing appeared to be progressing normally with no indication of infection. The liver was firm and of a light yellow color as the result of the embalming. The kidneys were of normal size and had the same light yellow color as the liver. The capsules stripped readily. On sectioning, the markings were indistinct. The spleen was small, very firm and the surface covered with small fibrous nodules from microscopic size to 2 mm. in diameter. On section these nodules were found to be scattered throughout the entire organ.

The intestinal tract was normal.

The chest was not examined.

After removal of the calvarium, an intra-meningeal hemorrhage extended over the parietal area of the left cerebral hemisphere around the fissure of Rolando was observed. This hemorrhage was beneath the dura and into the pia mater extending into the sulci. The area covered measured roughly 2 cm. in diameter, while the hemorrhage was approximately 1 to 5 mm. in thickness. There was considerable congestion over

the surface of the right hemisphere and cerebellum, but no hemorrhage.

On sectioning the brain the blood was found to be confined to the pia and filled all the sulci of the affected area. Grossly there appeared to be no penetration of the cortical substance by the hemorrhage. The choroid plexus on either side was greatly congested. No other gross pathological changes were found in the brain.

*Anatomical Diagnosis:* Hemorrhage into the pia mater over the left hemisphere.

Chronic splenitis.

Abdominal incision for hysterectomy.

Recent hysterectomy.

The histological diagnosis of the organs is acute parenchymatous nephritis, beginning cirrhosis, and chronic splenitis. The small nodules seen in the spleen had necrotic centers with wide connective tissue walls. Special stains for spirochaetae and tubercle bacilli failed to reveal any of either.

In sections of the cerebrum through the hemorrhagic area the pia is distended with blood which fills all the small sulci. Here are found several large thin-walled vessels but in none of these did there appear to be any injury to the wall or any rupture of the same. In one small spot the blood had infiltrated into the cortical substances with but little apparent damage to the motor cells. The cortical cells were normal. Sections from other parts of the brain revealed nothing abnormal. The blood vessel walls were not sclerotic.

The determination of the cause of such a meningeal hemorrhage would be highly instructive. It appears to us, from the clinical and pathological findings, that the hemorrhage probably occurred due to raised arterial tension and rupture of a small blood vessel during the excitement stage of the anesthetic but that only a very small quantity of blood escaped, not enough to cause any symptoms. Then the hemorrhage slowly increased in size until the motor area was stimulated, producing convulsions. That the ether anesthesia may have been responsible is suggested since this so closely resembles the case reported by Fairlie.<sup>3</sup> S. W. Hewitt<sup>6</sup> in his textbook on the subject, mentions intracranial hemorrhage as a concomitant of ether anesthesia, where, owing to the action of the ether as a circulatory stimulant, and also to the frequent degree of venous stasis in the early stages of ether administration by the closed method, it is most liable to occur. On the other hand it may be that this case belongs to the so-called spontaneous meningeal and subarachnoid hemorrhages as described by Cor-

dier<sup>7</sup> and Ehreberg<sup>8</sup> and that through the concomitant factor of anesthesia and operation it was caused earlier than it would have happened normally.

It has been suggested that the premonition of death may have been an important factor in causing death. Although premonition of death may be considered by most surgeons a contra-indication for operating, such a psychical state could hardly have caused a sudden pathological condition, especially so when we consider the other pathological findings including the acute nephritis.

An explanation built partially upon the history and upon the pathological findings is that the patient had an unrecognizedluetice infection which had affected a small artery which leads to rupture when the arterial tension was increased during the anesthesia. All of the explanations are more or less hypothetical but they may suggest methods of prevention or interpretations of similar unfortunate experiences in the future.

#### DISCUSSION

DR. A. J. OCHSNER stated that the history of Dr. Green's case was especially interesting, because of the very careful way in which the case was studied before and during the operation and at the autopsy. In all probability, the apoplexy from which the patient evidently died was a coincidence. It did not seem as though one could make out any definite relation between the anesthetic given and the apoplexy which evidently killed the patient. There was one element in the history that he thought was significant, namely, the patient had a premonition. In his personal observation he had had a number of very striking instances of patients who had such a premonition. He had several times operated upon such patients, foolishly, before the premonition had entirely disappeared. Usually, if one did not operate at that time, presently the patients would beg for an operation and they got over this feeling. In two instances he had made very striking observations. One case was a surgeon who was to have an operation for hypertrophied prostate gland. In the morning, when the speaker came to the hospital, he was told that the physician wished to speak to him. He went to his room and was told of this premonition. The speaker made light of it and told the physician he would put off his operation until later in the morning, when he would feel better about it. He went to the operating room operated upon a patient, and was suddenly called to this doctor's room and found that a moment before he had spoken with a nurse, and then he rolled over and died. There was nothing wrong with him, so far

6. S. W. Hewitt; *Anesthetics and Their Administration*, London, McMillan & Co., 1902.

7. Cordier, Levy and Nove-Josserend; *Ann. de Med.*, Paris, 11, 107.

8. Ehrenberg; *Hygiea*, Stockholm, 1912, LXXIV, 849.



as he could determine, when he saw him half an hour before. His pulse was normal; he had no temperature. He had walked into the hospital the day before. He had been well, with the exception of having a moderate amount of obstruction due to an enlargement of the prostate gland.

The speaker narrated a similar case in a man upon whom he was to operate for hemorrhoids.

DR. CARL WAGNER stated that fifteen years ago he was going to operate on a woman, 35 years of age, for a slight affliction. He watched the administration of the anesthetic himself. The woman took six whiffs of chloroform and died. She had made the remark before the operation that her mother died on the same day, under the same circumstances, in the operating room, after taking a few whiffs of chloroform. He could not obtain a post-mortem examination, but attributed death to status lymphaticus.

About a year after, he had a case of multiple fibroids of the uterus. He refused to operate, because it did not seem clear to him that these small fibroids were the cause of the symptoms which the woman manifested. They were nervousness, depression and pain, with retardation of cerebration, if he might so term it. He asked the permission of the relatives to keep the patient under observation before operating. He saw the woman on the seventh day at 12 o'clock, and at 12:30 he received a notice that the woman had suddenly died of apoplexy. He would not permit the intern to sign the certificate of death of apoplexy unless a post-mortem was granted. Post-mortem examination disclosed a large tumor of the frontal lobe, which undoubtedly was the cause of death.

### BLOOD PRESSURE AGAIN—A FEW OBSERVATIONS\*

J. SHERLAW, M. D.,  
CHICAGO

Perhaps the best way to get a correct conception of what constitutes an abnormality of the circulation, such as hypertension or hypotension, and the symptoms by which these conditions are recognized, is to first of all clearly grasp certain physiological facts that underlie the normal variations of pressure, so that one may the more readily understand and appreciate pathological conditions which find expression in abnormal pressure variations.

As you are well aware, there are several factors which enter into the problem of the maintenance and regulation of blood pressure, and a correct interpretation of blood pressure readings presupposes a thorough understanding of the entire

circulatory apparatus, i. e., the heart, vessels, vasomotor nerves, and likewise of the blood itself.

The heart is, of course, the main source of energy in the maintenance of the circulation, as it is almost entirely due to the contractile force of the left ventricle that the blood is propelled from the center towards the periphery, and blood pressure maintained within the vessels. It is not difficult, therefore, to realize how a faltering heart on the one hand, or a hypertrophied heart on the other, may be reflected in our blood pressure readings.

Besides the strength of the cardiac muscle, however, there are other factors which play a very important part in the regulation of the blood pressure. At each ventricular systole an additional quantity of blood is forced by the heart into an already filled system of arteries, which, in virtue of their quality of elasticity, dilate to accommodate each systolic output, and during diastole contract, thus forcing the blood on through the arterio-capillary field under a somewhat steady pressure. Thus we have first, ventricular systole with forced distension of the arterial walls and closure of the aortic valves, followed by vascular systole, if you will, i. e., the recoil of the musculo-elastic vessels to their normal caliber, which is neither more nor less than the liberation of cardiac potential stored in the vessel walls during systole. It is perfectly evident, therefore, that the impairment of vascular elasticity from whatever cause, involves relatively, a great waste of cardiac energy and likewise a reduction of efficiency throughout the whole circulatory field.

In measuring blood pressure mechanically, certain terms are employed to express the various pressures. Thus we speak of the systolic, diastolic, and pulse pressure. The mean pressure which, roughly, equals the diastolic plus one-third of the pulse pressure (Dawson) has not hitherto been much employed in clinical work. Generally speaking, the systolic pressure may be regarded as an index of cardiac efficiency, while diastolic pressure is held to represent the measure of peripheral resistance, whether from the enormously increased area of friction between the blood and the vessel walls in the circulatory tree in the normal state, or from an acute or chronic toxic or organic contraction of the arterio-capillary field, or from Bright's disease or what not. The difference between the maximum or systolic

\*Read before Englewood Branch, Chicago Medical Society, February 6, 1917.

pressure and the minimum or diastolic pressure is spoken of as the pulse pressure. This so-called pulse pressure is a rough measure of the ventricle's power to efficiently carry on the circulation. If the central power station, the heart, be equal to the peripheral resistance, and no more, there will be no circulation in the vessels. In the normal state, however, the resistance is to the ventricular force about as two is to three. If the peripheral resistance, represented by the diastolic pressure, be 80 mm., and the systolic pressure 120 mm., then the latter overtops the former just 40 mm., which represents the amount of systolic force available to move the load of the circulation. Call it pulse pressure if you will, so long as you do not lay yourself liable to the charge of darkening counsel by words.

In studying this subject somewhat carefully one can hardly fail to be impressed with the fact that perhaps too much effort is being expended in an endeavor to saddle the question with a burden of mathematical exactness which it is not prepared to bear. The interpretation of circulatory conditions has not been reduced to an exact science. As a matter of fact, we know comparatively little about even the normal variations of blood pressure, and as Mackenzie says, this knowledge is not to be acquired in the laboratory or even in the hospital ward or the out-patient department, but by the trained observer in the field of general practice, who will have an opportunity of noting, not from day to day or week to week, but from year to year just what variations of blood pressure are consonant with a continuance of good health.

Little wonder, therefore, that the writer just quoted, who has spent thirty or more years in the fruitful observation of cardio-vascular conditions, should become a trifle impatient in presence of the exuberance of adolescent enthusiasm which finds expression in algebraic formulæ and arithmetical ratios when dealing with the relation between the so-called pulse pressure and the systolic or diastolic pressure. On another page, in writing of the prognosis of high blood pressure, he exclaims with a probably regrettable touch of scorn, "There has been so much nonsense talked and written about high blood pressure, that I am constrained to draw attention to our extreme ignorance of the cause and consequence of raised blood pressure." And again in his more recently

published work in dealing with statistical methods in prognosis he has some things to say that might well be quoted verbatim. He surely must have had Disraeli's dictum in mind relative to the various kinds of lies when he wrote the following: "Attempts are made at times," he says, "to estimate the probabilities of life by finding at what age a great number of people die, who during life have shown some sign, such as a murmur or an irregular action of the heart. It is curious that the fallacy of this view is not recognized. If I were to note the age at death of a great number of people with soft corns, and were then to lay it down that the average period of life in those persons represented the probable duration of life in all persons with soft corns, the absurdity of this method of reasoning would be perceived at once. Why is it absurd? Because a soft corn is not a fatal disease. Now, the vast majority of signs on which the insurance examiner bases his statistics are as free from risk to life as are soft corns." He again says: "In fact, under all circumstances, the blood pressure, like murmurs, should not form the basis of an opinion, but should be one factor, and that not the essential."

On the other hand, the insurance examiner<sup>1</sup> has shown that among 525 persons insured with an average pressure of 152.58, the mortality was 30 per cent in excess of the general average of the company; and among 1,970 applicants rejected solely because of an average pressure of 161.44, the mortality was 190 per cent of the medico-actuarial table, and more than double the average mortality of the company.

In the insurance examiner's series of cases, however, evidently no account whatever was taken of the diastolic pressure, the systolic reading only being given, and because of this omission many will instantly question the scientific accuracy of his conclusions. We are informed, today, by those best entitled to a hearing that "observations of the systolic pressure alone are of relatively little value," and again, "there can be no longer any excuse for neglecting this *far more important* of the two phases of arterial tension," viz., the diastolic pressure. In the absence of the latter reading, therefore, it is not too much to say that the picture is lamentably incomplete, so much so, indeed, as to make it impossible to state that a certain percentage of

1. Jour. A. M. A., 1914, LXIII, 1753.



those cases were not suffering from chronic interstitial nephritis. True, there may have been an entire absence of albumin and casts, but, as Cabot says, in this connection, "I see a good many cases of renal disease entirely free from albuminuria and from casts, but with high blood pressure, which are shown later—postmortem—to be renal disease. Examination of the urine," he says, "has again and again led me astray; the measurement of the blood pressure almost never." So, whether the insurance examiner's formidable array of figures will be accepted as conclusive evidence in this matter, or eventually reach the discard labeled "Disraeli's third classification," it may be too early to say. This much may be ventured, however, that they do not, for several reasons, rest upon a too secure foundation. For example: the average insurance examination is not made under ideal circumstances for scientific accuracy. In nine cases out of ten only one estimation of pressure is taken. True, one may require to be taken at the beginning of the examination and another at its close, but whether or not it means, essentially, one estimation only. Then the examination of the applicant is not infrequently made in the evening after he has finished the principal meal of the day, of which beer or wine may have formed a not inconsiderable part. He may be, and frequently is, undergoing examination for the first time, and is naturally less or more exercised, or, it may be, is decidedly nervous over the ordeal. He may have walked hurriedly to the doctor's office for examination or have sat and stewed for an hour awaiting the examiner's arrival. Who that has had any experience of this kind of work will venture to say that these circumstances are insufficient in themselves to cause an increase of 20 or even 30 mm. systolic pressure in many cases. You will notice I say systolic pressure, because this is the pressure immediately susceptible to temporary influences. The diastolic pressure moves much more slowly—is a much less easily disturbed factor, and hence a more valuable criterion in deciding whether there be present any organic cardio-vascular or renal disease. It is for this same reason that so large an after-supper pulse pressure can frequently be obtained by the careful examiner. Here is a field for the exercise of that indefinable something which for want of a better name we call good judgment, and heaven help the unfortu-

nate applicant who is to be judged by any stereotyped statistical standard.

The systolic pressure alone, to be sure, yields considerable information sometimes, but unless the systolic index is checked up by the diastolic pressure present serious mistakes are liable to be made. One not infrequently sees men of, say, 50 years of age who show a systolic pressure of 130 mm., which is by no means abnormal in a man of this age; and if one goes no further with his investigation, but simply concludes that the man's pressure is all right, he may do both himself and his patient an injustice.

Few are likely to be caught in this way, however, especially nowadays when it is just as easy by the auscultatory method to take the diastolic as the systolic pressure. Suppose, then, that in the case before us we take the diastolic pressure and find it to be 110 mm. What would that indicate? The intelligent insurance examiner will tell you that he would consider this a good case for rejection. Why so? Because he would conclude, and rightly so, that he was dealing with a man suffering not only from interstitial nephritis, in all probability, but also from a failing myocardium. In other words, a diastolic pressure of 110 mm. presupposes a systolic pressure of 160 mm., or thereabouts. The circulatory balance is therefore broken, and broken because of the heart failure, though as you will recall the systolic reading of 130 mm. was of itself no indication whatever that the heart muscle was degenerate. Under normal conditions, then, there is always a reciprocal balance maintained between the maximum and minimum pressures through the agency of the vasomotor nerves; while under abnormal conditions the reciprocal balance is disturbed and a scientific interpretation of the disturbance calls for no mean order of intelligence and affords real help in determining to what extent the heart, vessels or kidneys may be involved.

The imperfection of our knowledge concerning the causation of arterial hypertension renders a satisfactory classification of the condition, so far, impossible. The following types, however, can usually be differentiated without much difficulty: First: the renal type. Second: the arterio-sclerotic type. Third: the mixed, or combined type, in which both vessels and kidneys are distinctly involved. And fourth: what has been called essential or non-nephritic hypertension—also

spoken of as the stage of hyperpiesis or pre-sclerosis. Of the protean causes adduced for this hyperpietic condition it is needless to speculate further than to state that it is generally believed to be due to an auto-toxemia of some kind which, by its irritation of the vaso-motor centers, causes a spastic contraction of the arterioles, thus increasing the peripheral resistance and rendering necessary greater effort on the part of the heart with a consequent elevation of arterial pressure. Some, of course, believe that much of the mischief is due to excessive proteid intake, and some color, at least, is lent to this theory by the fact that the rice-eating Japanese and East Indians enjoy a relative immunity—are, indeed, rarely the subjects of arterial hypertension.

In this country of ours, particularly, where the habit of "racing the motor"—the human motor—prevails universally, and where, instead of taking time to masticate our food in a sensible manner, we adopt the short-cut of washing the half-chewed material into our stomachs in a solution of caffeine or tannic acid or something more ardent, it is beginning to be recognized that this very condition of hypertension is sharing the honors with neurasthenia or "the American disease" much more equally than most people have any idea of. And, by the way, it is worthy of notice in passing that there is more than a mere incidental correspondence in the symptom-complex of the two conditions. In fact, apart from a blood pressure reading it is difficult in some cases to say whether the patient suffers from neurasthenia or hypertension. One authority on the subject, for example, gives the nervous symptoms of arterial hypertension as follows: Matutinal headache, nervousness, restlessness, irritability, inability to concentrate, easy fatigue from mental exertion, insomnia, tingling, numbness, migraine, transitory aphasia, hemiplegia, apoplexy. If one leaves off the last two or three terminal symptoms this would not be a bad symptomatic description of neurasthenia. True neurasthenia, however, or the "X" disease, as it has been called, on account of its nebulous characteristics, is a *hypo*-tensive condition.

In a paper recently published by Dr. Riesman of Philadelphia, entitled "Are We Exaggerating the Dangers of Arterial Hypertension?" the writer urges the necessity of recognizing the benign or pre-sclerotic type of hypertension. It

occurs, he says, in men and women past middle life, who are obese, ruddy-complexioned and expenders of great mental and physical energy, etc. And, doubtless, this very class represents a large and important group of hypertensive cases familiar to all of us. We meet them every day. Our attention is arrested by the ruddy, almost purple hue of their complexion an hour after dinner, and we have sometimes caught ourselves speculating quietly as to what the outcome of these cases would be, notwithstanding the fact that these subjects are inclined to be boastful of their splendid physical condition. Here is the field spoken of by Mackenzie for the exercise of patient and maybe prolonged observation. The kidneys may not be appreciably involved now, but in all cases of hypertension both heart and vessels are at least involved. The heart is compelled to do an increased amount of work in order to maintain a sufficient flow in the capillary field and hypertrophy is invariably the result, while the vessels under constant tension gradually lose their elasticity and undergo sclerotic changes. These changes do not take place in a day; many years may elapse before any subjective phenomena manifest themselves, as the degree of hypertension that can be borne varies greatly with the individual. Apart from proper treatment, however, it is believed the day will come in most cases when the 180 mm. mark will be passed, and few reach 200 mm. without profound subjective symptoms, while many are gathered to their fathers by apoplexy, angina pectoris, heart-failure or uremia long before they touch this point. So, whether or not the kidneys, heart and vessels be demonstrably compromised at our first examination of a hypertensive patient, it is always the part of wisdom to in all cases, institute a proper regimen with a view to staying any further progress of the condition.

The blood pressure idea has become almost an obsession with the people today, so that the mere mention of the term is sufficient to make the most indifferent sit up. It has almost reached the point where the good doctor who sallies forth without his blood pressure machine takes his reputation, if not his life, in his hand. It is amusing to listen to the chatter about hardening of the arteries causing blood pressure, and so on. The physician should be careful about revealing to his patients the secrets of his trade. Nine out



of ten of them don't get it straight, anyway, and the next doctor they go to has his soul wearied within him by the ventilation of this new thing.

In what relation, then, does arteriosclerosis stand to hypertension? It seems to have been rather generally believed that hardening of the arteries stands in a causative relation to high blood pressure, but such is not the case. Indeed, the reverse of this is true. It is now quite generally accepted that arteriosclerosis and cardiac hypertrophy are alike secondary to hypertension. Among others, Drs. Osler and Albutt both give hypertension as one of the leading causes of arteriosclerosis, and those best entitled to an opinion today believe that arteriosclerosis uncomplicated rarely, if ever, produces hypertension. About 35 per cent. of all cases of well-marked peripheral sclerosis have normal or subnormal pressures, and the evidence at hand justifies the belief that where hypertension is present in arteriosclerosis it is due to the involvement of the systemic arterioles in the sclerotic process. While it is, therefore, still perfectly correct to speak of a man as being just as old as his arteries, it is incorrect to conclude that his life is endangered by arteriosclerosis because he presents the familiar pipe-stem radial or tortuous temporal artery, because the hardening of these vessels may indicate but a relatively benign form of the disease. Savill's studies, based on some 400 autopsies on individuals of and over 60 years of age showed that extensive patchy atheroma is consistent with extreme longevity and an entire absence of hypertensive conditions, and the same conclusion holds true in marked generalized intimal and adventitial sclerosis so long as the medial arterial wall is relatively uninvolved. It would seem, therefore, that arteriosclerosis, *per se* does not, as a rule, produce much hypertension, and where a pressure of, say, 160 mm. is present for a prolonged period, it may be taken for granted that there is at work some other cause which sooner or later will very likely be found to be chronic interstitial nephritis.

Norris, in dealing with nephritic hypertension, has this to say: "The increased blood pressure which occurs in connection with renal disease, especially with that form which is clinically designated as chronic interstitial nephritis, is the most striking, and diagnostically, perhaps the most important abnormality of arterial tension

which is met with in the entire domain of medicine. There seems to be a tendency to revert to the old concept of Gull and Sutton that chronic interstitial nephritis results from general and not merely local disease of the arterioles—that it is primarily a vascular disease, of which the renal changes are but secondary manifestations."

It is still doubted by some, that increased arterial tension stands in a causative relation to cardio-vascular-renal disease. It is the belief of others, however, that this condition of hyperpiesis, or hypertension not due to demonstrable lesion of vessels or kidneys, if allowed to go on unchecked will certainly eventuate in organic hypertension. And it is a reasonably safe assumption that wherever one encounters a constant systolic pressure of 160 mm., and a diastolic pressure of 110 mm., or thereabouts, one has chronic interstitial nephritis to deal with whether or not the urinary findings are confirmatory. This does not necessarily mean, however, that the patient is going to die immediately of uremia, because many live for a long period with little apparent increase of the renal lesion, while others not infrequently drop off from cardiac and vascular complications.

In those cases of nephritic hypertension the heart is usually markedly hypertrophied, especially in cases where the disease has developed early in life. If of later development, the frequently associated sclerosis of the coronaries renders the same measure of hypertrophy less likely. It is during the later stages of this condition that so many cases of chronic myocarditis are encountered, these being, of course, secondary to the hypertrophy, which is always the result of obstruction to the normal emptying of the ventricle. The obstruction in this instance, however, is not a stenosed valve, but a stenosed vessel, or rather a multitude of vessels—the peripheral arterioles—in which morbid process the kidneys are also involved. These vessels are compromised by a sclerotic thickening, probably accompanied by a spastic condition, the result of a toxemia, or an asphyxia of the medullary centers, or from a combination of causes. It is thus, by the way, that the so-called high-pressure stasis is sometimes produced, even in cases of far advanced myocardial trouble. In these cases the outflow of the blood into the tissues is impeded by the tonic contraction or sclerosis of the arteri-

oles, and in this condition even a failing heart is competent to throw sufficient blood into the arterial system to keep up a state of hypertension. Then the slowing of the circulation consequent upon the condition stated permits an excess of carbon-dioxide in the blood, and this, in turn, bathing the vaso-motor centers, keeps up an irritation which results in still further peripheral contraction and thus maintains indefinitely the condition of high-pressure stasis.

Of arterial hypotension it will be unnecessary at this time to say anything, save that it is a condition of vaso-motor unfitness due probably to improper nerve balance. The hypotensive patient is not actually ill, but never really well—is pale, with cold extremities, faints easily, is troubled with so-called nervous dyspepsia and constipation; is easily fatigued mentally and physically; moody, emotional, sensitive to caffeine and nicotine, as well as to atmospheric and barometric pressures. A low blood pressure is likewise associated with a variety of conditions such as chronic tobacco poisoning, debility from overwork and insufficient nourishment, tuberculosis and other wasting diseases, acute infectious diseases, etc. The treatment of the condition is, of course, the treatment of the underlying cause.

The same, indeed, might be said relative to the treatment of hypertension. If it be found, however, upon careful examination that the hypertension does not rest upon demonstrable cardiovascular or renal mischief, it is imperative that the character of the toxemia be determined if possible, and treatment for its elimination instituted. It may be plumbism or of intestinal origin—two rather frequent causes—or it may rest upon some focal infection such as pyorrhea, alveolar abscesses, diseased tonsils, an infected gall bladder, or what not? And we know that during the later months of pregnancy, and not infrequently during the earlier months, if we get a constantly rising pressure, even though the urine be yet negative, it points unmistakably to a toxemia that will require careful watching. On the other hand, the most searching investigation may fail to reveal any local cause for the hypertension present, and one must conclude that it is the result of the toxic factors attendant upon a faulty mode of living. Whatever the cause is found to be, even though discovered by a Wassermann, it, of course, suggests its own treatment—local causes requiring

local treatment primarily, while alimentary hypertension which is believed to be due probably more to excessive eating than to the character of the food ingested will require to be treated by a proper supervision of the diet. A simple, non-stimulating diet, consisting largely of vegetables, fruits, etc., will be found the most favorable whatever the cause of the hypertension. In the hypertensive or presclerotic stage of the condition the total acidity of the urine is usually found to be very high—not infrequently 150 to 200 per cent too high, but the acidity does not long remain excessive if the patient is kept upon a largely vegetable diet, and it is very gratifying to note the almost immediate amelioration, especially of the nervous symptoms in this condition consequent to a change from animal to a vegetable food. It is our belief that in the treatment of this condition one thing particularly ought to be insisted upon, and that is a change in the habits of life, and, as far as possible, of thought, especially on the part of those middle-aged patients characterized by their feverish, restless, beef-steak activity. My mind reverts to a hypertensive, hard-working school principal of middle life, whom I told sometime ago that unless he lowered sail and contented himself to go along at less than 50 per cent of the speed he was traveling, something would snap, and he would either die suddenly or vegetate for the remainder of his days. For a time the warning was heeded, but before long he was going at his old gait, at his school all day and away teaching somewhere in the evening, getting home exhausted at a late hour. He is in his grave today from apoplexy.

Elimination by all the emunctories is, of course, urgently demanded, and in this connection it might be well to call attention to Lauder Brunton's recommendation of a dose of blue mass or calomel once or even twice a week.

Baths? They are all right. The Spa or Sanitarium treatment has its place, but, of course, it does not loom quite so large in rational medicine as in the popular imagination.

Exercise in the open air daily to a point just short of fatigue is most desirable.

Drugs? Well, before using any of them specifically for this condition it is always well to remember that hypertension is not infrequently a compensatory condition, and it is not always the part of wisdom to disturb Nature's equilibrium



inadvisedly. Circumstances do arise, however, when it becomes imperative to tide a patient over a crisis, and though it is not good practice, unless one is absolutely sure of his ground, to reduce the systolic pressure by nitroglycerin or one of its congeners, when the diastolic pressure is also high, yet because of the fact that in all organic hypertension there is less or more of the spastic element, a few doses of nitroglycerin may afford the patient much relief by overcoming the arteriolar spasticity and permitting a freer flow of blood in the capillary field, even though it be but temporary.

In cases where apoplexy is threatened, venesection is the method of choice, whereas in hypertensive angina pectoris, which sometimes occurs, though far from constantly, amyl-nitrite has made for itself a distinct reputation. Where cataract extraction is to be performed in high pressure cases, sodium nitrite given for twenty-four hours before the operation is said to diminish the danger of intra-ocular hemorrhage by lowering the pressure.

Where the heart muscle shows signs of failure digitalis may be used without fear. At first thought one would almost expect this drug to raise an already too high pressure, but such is not the case; indeed, by its relieving venous congestion it is sometimes instrumental in lowering pressure. Potassium iodid has been used in five grain doses, t, i, d, even in the absence of a positive Wassermann, with apparently beneficial results, but it would probably be more rational to as far as possible shape our therapeutics by our diagnosis.

7001 Normal Boul.

## URINARY ABNORMALITIES AMONG THE INSANE\*

HOWARD T. CHILD, M. D.,

KANKAKEE, ILLINOIS

Observation has shown that while common infective diseases present a well-defined clinical form with respect to the pathogenic agent concerned in its etiology, this particular is completely wanting in acute mental affections. The same toxin may produce very different form of psychosis. Just as acute alcoholic intoxication may produce exhilaration in one person, sullenness, melancholia, and weeping in another, so

may toxic properties of urine and blood serum as well as the presence of certain microorganisms in the blood, often coincide with the most diverse forms of insanity.

This paper, as its title infers, will take up some of the abnormal conditions which we find in the examination of the urine among the insane, as well as the clinical symptoms referable to that class of persons.

First and foremost, these people are not well; they are living in an entirely different environment than they have been accustomed to. Active men and women, who previous to their commitment, brought various muscles into action while performing their various duties, are apt to become merely automatons when placed in a state hospital. Their food is changed, and as a result certain changes must be undergone by the various organs which have to do with the secretions of the body.

Among the insane, the following abnormalities may be considered: First, disturbances of micturition, frequently as a result of mental emotion.

Disturbances of micturition due to a diet which produces urinary irritation.

Dysuria or painful urination often of nervous origin is to be contended with, especially in diseases of the spinal cord.

We must eliminate prostatic congestion, cystitis, urethritis and stone in the bladder, when patient complains of this condition.

Retention of urine, or inability to completely empty the bladder. This condition is especially met with in paretics and senile psychoses. The degree of retention may be referred to as atony, paresis or partial paralysis where from lack of muscular power the bladder cannot well force out all the urine contained therein. Complete paralysis exists on account of some brain or cord lesion and the bladder is incapable of expelling the urine. However, in atony and paralysis the bladder may be distended to its utmost capacity and the excess of this dribble away voluntarily, or may be expelled by repeated acts of urination, accompanied by great straining and contractions of the muscular walls of the abdomen. We should at once determine whether the retention is due to any of these three causes:

1. Obstruction; 2, Trauma; 3, Paralysis, and give our treatment accordingly. No condition in

\*Read before the Illinois State Hospital Medical Association, October 27, 1915, at Elgin, Ill.

urinary diseases is so trying to those who have the care of the insane as urinary incontinence, and every means should be taken to discover and remove the cause. Changes in the amount of urine may be classified as polyuria, anuria and oliguria. Polyuria may be divided into moderate and marked form. The moderate form is due either to renal diseases, as chronic interstitial nephritis, amyloid kidney, reflex congestion, pyelonephritis or tubercular kidney. The diabetes may be associated with the moderate form or, more often, with the marked.

The latter class arises secondary to cardiac and hepatic diseases, while a great many arise from nervous causes. Among these we may enumerate hysteria, epilepsy and exophthalmic goiter, disease of the hypophysis, etc., and reflexly from cerebral hemorrhage, meningitis, sclerosis of the cord, general paralysis of the insane, and mental strain.

Anuria is due to nervous causes depending on a variety of conditions. Complete suppression has been found in hemiplegia from fracture of the skull, but more frequently it is due to a reflex inhibition of secretion. For example, an irritation of one kidney can so affect the other reflexly that anuria will follow. This is seen in anuria after several burns, also after renal colic. Obstructive anuria may result from blocking the lumen of a urether or kinking. The former is most common and found in renal calculus.

Oliguria or a diminution of the quantity of urine which is found in acute exacerbations of chronic nephritis, stasis of kidney as a result of heart disease, after anesthetics and just before death. Changes occur in the character of the urine as noted in pyemia, cystitis of general paralysis, and the occasional hematuria found so often in prostatic inflammation, or renal stone, or in acute nephritis.

What does the clinical examination of urine taken from persons having a well-developed form of psychosis show? Instead of the usual transparency of urine, there may be cloudiness, as a result of either bacteria, phosphates, pus or fat being present. These can be eliminated by heat and acetic acid, or K. O. H. tests. The specific gravity permits one to gain a fair idea as to the amount of solids secreted by the kidneys. A high specific gravity is found when an excess of nitrogenous food is ingested, after sweating and mus-

cular exertion. A low specific gravity with an absence of albumin and sugar means less urea. A decreased amount of urine in late stages of nephritis and cardiac disease, if of low specific gravity, means danger.

At the Kankakee State Hospital in examinations embracing 1,000 specimens of urine the following range was noted:

High Specific Gravity.....	Maximum .1036
	Average .1020
Low Specific Gravity.....	Minimum .1003
	Average .1010

Albumin was found in 173 cases out of a series of 768 examined, or about 22 per cent. The amount of albumin varied from a faint trace in 106 cases to strongly positive reaction in 63 cases. Associated with this hyaline and granular casts were found in 59 cases, epithelial casts in 14, all of which show that some destruction of the kidney tissue was taking place.

The psychoses existing in the above-mentioned cases having albumin and casts are as follows:

Dementia præcox stands first, with 25 of this number; general paralysis of the insane, 15; senile psychosis, 5; epilepsy, 3.

In the postmortem examinations we find a great many changes in the kidneys, chronic interstitial nephritis predominating. For the biennial period ending October, 1912, 18 deaths out of a total of 502 are recorded as due to that condition, while for the biennial period ending October 1, 1914, 23 deaths among a total of 624 are recorded as primarily due to this disease.

The urea output has been observed. The amount secreted has, of course, varied with the diet; a low output being associated with an exacerbation of the psychosis together with a change in the physical condition of the patient, while other causes show an increase from a low to a high output followed by some improvement in the mental condition of the patient.

*Glucose.*—My observations do not prove that glycosuria is any more prevalent in the insane than in those not afflicted, but where it does occur, the mental symptoms are influenced by the amount of glycosuria present.

*Indican.*—Cases in which a great deal of intestinal putrefaction occurs, as in epileptics, especially show an increase in the amount of indican eliminated by the kidneys.

(Continued on page 294)



# ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society, under the direction of the Publication Committee of the Council.

## GENERAL OFFICERS, 1917-18

PRESIDENT.....E. B. COOLLEV, Danville  
 PRESIDENT-ELECT.....E. W. FIEGENBAUM, Edwardsville  
 FIRST VICE-PRESIDENT.....E. P. SLOAN, Bloomington  
 SECOND VICE-PRESIDENT.....SADIE BAY ADAIR, Chicago  
 TREASURER.....A. J. MARKLEV, Belvidere  
 SECRETARY.....W. H. GILMORE, Mt. Vernon  
 (Ex-officio Clerk of the Council)

## THE COUNCIL

District 1—EMIL WINDMUELLER, Woodstock.  
 District 2—EDWIN S. GILLESPIE, Wenona.  
 District 3—CLYDE D. PENCE, Chicago.  
 District 4—C. S. NELSON, Springfield.  
 District 5—C. D. CENTER, Quincy.  
 District 6—C. F. BURKHARDT, Effingham.  
 District 7—C. E. PRICE, Robinson.  
 District 8—FRANK C. SIBLEY, Carmi.  
 CLYDE D. PENCE, Chairman, 3338 Ogden Avenue.

Send original articles and all communications relating to advertisements and mailing list to Dr. Clyde D. Pence, Editor, 3338 Ogden Avenue.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

## MEDICO-LEGAL COMMITTEE

ANDY HALL.....Mt. Vernon  
 WILLIAM O. KROHN.....Chicago  
 GEORGE STACY.....Jacksonville  
 D. R. MACMARTIN.....Chicago  
 C. B. KING, Chairman.....3938 Jackson Blvd., Chicago  
 THOMAS D. CANIRELL, Secretary.....Bloomington

## GENERAL COUNSEL

ROBERT J. FOLONIE.....39 S. La Salle Street, Chicago

State society will pay no bills for legal services except those contracted by the committee. Notify the Chairman at once. Don't employ attorneys.

OCTOBER, 1917

## Editorials

Buy a Liberty Loan Bond, and thereby help the men in the field.

## NOTICE

All persons desiring to read papers before the next annual meeting of the State Society will please communicate with the officers of the various sections.

Section on Surgery—John S. Nagel, chairman, Chicago; A. Millard, secretary, Minonk.

Section on Medicine—C. Martin Wood, chairman, Decatur; S. R. Slaymaker, secretary, Chicago.

Eye, Ear, Nose and Throat—J. Sheldon Clark, chairman, Freeport; Wesley H. Peck, secretary, Chicago.

Public Health and Hygiene—Grace Campbell, chairman, Chicago; W. E. Park, secretary, Rockford.

Secretaries' Conference—Flint Bondurant, president, Cairo; T. D. Doan, vice-president, Scottville; F. C. Gale, secretary, Pekin.

All papers read before the society are the property of the society, and will be subject to publication in the ILLINOIS MEDICAL JOURNAL.

## A RESOLUTION

BY THE COUNCIL OF THE ILLINOIS STATE MEDICAL SOCIETY

WHEREAS, Tuberculosis has assumed an importance second only to the treatment of wounds inflicted in battle among the medical men of our allies in this war, and

WHEREAS, The increase of this disease in the civilian populations of the nations of Europe engaged in war, has been so great as to become of paramount importance as an economic and social factor, and

WHEREAS, There is grave danger that the United States will suffer in like manner unless prompt and efficient action be taken in this country, and

WHEREAS, The funds from the sale of Red Cross seals is all used in combating tuberculosis through the work of tuberculosis sanatoria, dispensaries and clinics, through the work of visiting nurses, and through educational propaganda, therefore,

*Be it Resolved*, That the Council of the Illinois Medical Society hereby endorses the motive behind the Red Cross seal campaign in Illinois, and that we urge the people of this state to co-operate in every possible way with the work of Red Cross seal committees in their respective localities to the end that through a largely increased sale of seals in Illinois this year, a larger fund be made available for work against tuberculosis—a disease that kills more of our men, women and children than all other communicable diseases combined.

## RESOLUTIONS OF THE COUNCIL

At a meeting of the Council of the Illinois State Medical Society, in session at the Sherman House, Chicago, Ill., September 25, 1917, the following resolutions of respect for Dr. Arp were unanimously adopted:

WHEREAS, It has pleased the Supreme Architect to remove from this Council by death one

of our fellow Councilors and co-workers, Dr. August H. Arp, Moline, Ill., be it

*Resolved*, That in the death of Dr. Arp this Council and the State Society have sustained a great loss. Dr. Arp was a genial and noble gentleman, who, on all occasions, had the best interests of the State Society in mind; and be it

*Resolved*, That the sympathy of this Council be extended to the wife and sons, who are deprived of the love of a noble husband and father; and be it further

*Resolved*, That a copy of these resolutions be placed upon the records of the State Society, a copy be published in THE ILLINOIS MEDICAL JOURNAL, and a copy be sent to the bereaved wife and sons of our deceased friend and brother.

C. F. Burkhardt,  
E. B. Coolley,  
E. W. Fiegenbaum,  
Committee.

### KEEP UP THE MEMBERSHIP

This is the time of year when most of the county societies begin the work of the year. Many of our societies will find it more difficult this year to maintain an interest and an attendance. This, because of the universal interest in the world war, and because many of our members are serving in the Army.

In nearly every county there are doctors who are not members and who should be active in society work. If every county secretary will secure two or four new members, it will help very materially to keep an interest in the county society, and will also help exceedingly to keep the State Society in a good state of organization.

The county secretary is not the only person who should secure applicants, but every member of the society should endeavor to get other doctors interested in the organization. Will you show your loyalty to your medical society by securing new members?

### SLACKERS.

We note from the daily press that General William H. Carter wishes this opprobrious epithet withdrawn from men who failed to reach camp on schedule time. He says, "Send them to camp with their self-respect."

After investigating numerous cases, General Carter says that the majority of the men who

had been called in the draft and had failed to report had offended through ignorance or because of unexpected exigencies, and he recommended to the war department that each case be investigated on its merits. This recommendation is certainly fair and shows humaneness.

There are in this country many young men who do not read or speak English and who are entirely illiterate, and it is difficult to conjecture the mental workings of such when suddenly called to leave their home and only possessions. It is but fair to give these men an opportunity to work into the spirit of patriotism as taught in an army camp.

We have seen recently a number of so-called "slackers" who were mentally deficient, and, who if enlisted in the army, could only prove a burden. For the real "slacker" we have no use and care not what becomes of him, but for the youth who is ignorant of the real demands on him, and who has been led to believe many lies, we have a good deal of sympathy. Furthermore, many of these timid fellows may be trained into the most courageous soldiers.

Give them the chance to make good. Do not start them out with such a handicap as a poor name. General Carter is to be commended for this attitude.

### LIBERTY LOAN.

Our Government is now floating its second Liberty Loan. We presume everyone, and surely every medical man knows what the loan is and what it is for. The next step is to help the Government dispose of these bonds.

Medical men are accredited with being large purchasers of mining stock, oil stock, and stocks of all sorts, not one in one hundred of which ever shows returns. Now this war has to be won, is going to be won, and it takes money with which to win it. If there were no returns from a purchase of a Liberty Bond—no return of either principal or interest—you still are making the best of investments in helping to save this country its liberty and the world from autocracy. Your financial returns would in that event be better than most of your oil stock investments, and your feelings would be saved immeasurably. You would not have that "buncoed" feeling. We know. But with the best security on earth for the principal and four per cent. interest.



the purchase of Liberty Bonds as an investment is not to be mentioned in comparison with such other investments that medical men as a class are likely to make.

It takes a vast amount of money to equip a large army and to back it up properly in the field. If the medical men can help in this undertaking, and at the same time make a profitable investment, why not? If you are a better financier and are able to make better investments from a financial viewpoint, it is still your duty to help finance the army.

We are in the greatest war the world has ever known, fighting for the life of liberty loving nations, and fighting for a government which has protected its subjects in freedom, which has enabled you to live in comfort and affluence, and which has enabled you to become what you are and to possess what you have. It is now your duty to help maintain that nation, so that you may retain both your freedom and possessions, and that your descendants may enjoy the privileges you have enjoyed.

#### APPEAL BY MR. HOOVER TO THE PUBLIC TO JOIN FOOD CONSERVATION FORCES

Herbert Hoover, Federal Food Administrator, makes the following announcement:

"The week of October 21 to 28 has been selected for a Nation-wide campaign to complete the enrollment of our forces in conservation of our food supply.

"The harvest is now at hand, and we can measure the world's food resources.

"The available supplies this harvest year are less than last year; the demand upon us is greater than last year, and from the last harvest we exported more than we could really afford. We can only meet the call upon us next year by savings and by substitution of commodities which can not be transported.

"The allies are our first line of defense. They must be fed, and food will win the war. All Europe is on rations or restricted supplies. Only in our own country is each one permitted to judge for himself the duty he owes his country in food consumption, although the world depends upon us to guard and provide its food supply.

"This is a duty of necessity, humanity, and honor. As a free people we have elected to discharge this duty, not under autocratic decree but without other restraint than the guidance of individual conscience. On the success of this unprecedented adventure in democracy will largely stake the issue of the war.

"We are asking every householder, every hotel, restaurant, and dealer in foodstuffs in the Nation to become a member of the Food Administration for conservation, and to pledge themselves to follow, in

so far as circumstances permit, the suggestions that will be offered from time to time as to measures of food savings.

"For us there is no threat of privation. We wish only that our people should eat plenty, but wisely and without waste. Wisdom in eating is to make possible such adjustments in our food consumption, shipping and war necessities as will allow us to fulfill our duty in exports to our allies. By elimination of waste we serve ourselves economically and morally.

"I, therefore, appeal to the churches and to the schools for their assistance in this crusade; to all the organizations for defense, local and national; to all the agencies, commercial, social, and civic, that they join the administration in this work for the fundamental safety of the Nation.—*Official Bulletin, Oct. 1.*

#### BEG YOUR PARDON

Owing to an error in the stenographic notes at the meeting of the State Medical Society, the discussion attributed to Dr. Edward F. Dixon on page 194 of the September JOURNAL should be charged to Dr. Thomas O. Edgar, of Dixon.

### Correspondence

#### TO THE MEDICAL PROFESSION

Baltimore, Md., Sept. 10, 1917.

Subject—The Problem of Re-education and Reconstruction of U. S. Soldiers Who May Be Crippled in the Present War.

From Major Joseph Colt Bloodgood, M. R. C., U. S. A., Chairman of Committee on Preparedness of the Southern Medical Association.

To Physicians and Surgeons in Industrial Practice:

Dear Doctor: I find your name in the index to the American First-Aid Conference, which indicates that we have had some correspondence in regard to problems of first aid in industries.

Major Edgar King, Medical Corps, U. S. A., has been placed in charge of the problem of reconstruction and re-education of U. S. soldiers who may be crippled in the present war.

If your relation to the industries in this country has given you any experience in this problem of vocational re-education and of finding new employment for the re-educated, handicapped industrial worker, please let me know.

Please send me the names and addresses of any medical or non-medical men and women who have had experience in this educational

problem. I am anxious to be helpful to Major King in this line.

This problem of reconstruction and re-education of the wounded in this war will be one of the largest to be met by the Government, and everyone who has had any special training or experience with such work should send his credentials to the Surgeon General's Office and offer his services, if he can be spared from his special duties to his community.

The Medical Reserve Corps of the Army still needs surgeons with special training in orthopaedic surgery, surgery of the head, brain, in plastic oral surgery, and in dental surgery. If you have had training in any one of these branches and are willing to enter the Medical Reserve Corps, please write me.

These departments in the Surgeon General's Office are willing to take a certain number of young men who have had good hospital experience and give them an intensive training in one of these special branches.

If you belong to this group, or know of any young men who do, please write me and give names and addresses.

Very sincerely yours,

Joseph Colt Bloodgood.

904 North Charles Street.

---

## Public Health

---

### ILLINOIS MAKES RAPID PROGRESS

Unprecedented strides have characterized Illinois' progress in the last three months toward getting the state organized, by counties, for the establishment of sanatoria.

It is a conservative statement to make to say the state has gone forward a longer way this fall than in five years before. Eight counties have made definite appropriations for sanatoria, or for preliminaries to them, and others are thinking the matter over with a view of acting soon.

The recent tuberculosis agitation in connection with the war—the movement to rescue recruits from the bitter punishments of the plague—has been in part responsible; establishment in Illinois of the Cooperative Committee, embracing the State Department of Public Health, the State Council of Defense and the Illinois Tuberculosis Association, has become another actuating factor.

In September the supervisors of several counties, which previously had voted on the proposition, availed themselves of the provisions of the Glackin tuberculosis sanatorium law, making steps which look toward

immediate or near future establishment of institutions within the counties.

In Morgan County, a two-mill tax was imposed for the sanatorium. This will provide a revenue of about \$40,000 per annum, and of that amount \$5,000 was set aside to defray expenses of visiting nurse and dispensary. Trustees in charge of the project are looking for a sanatorium site.

In another county, La Salle, a two-mill tax was voted. From the tax in this county approximately \$84,000 will accrue. Plans have been prepared for the sanatorium. Special interest attaches to La Salle county because of the cooperation of Dr. J. W. Pettit, chairman of the executive committee of the Illinois Tuberculosis Association. Dr. Pettit, veteran of the whole Middle West in the public fight against tuberculosis, established a sanatorium in Ottawa upward of fifteen years ago.

McLean County supervisors have authorized a one-mill tax, which will provide a fund of about \$40,000. Trustees plan, as soon as possible, to establish a county dispensary and to extend the visiting nurse service at public expense.

In Adams County a one and one-half mill tax was levied. This will provide a fund of \$40,000 which, with \$30,000 bequeathed recently by a public-spirited woman who since has died, will make the county a total of \$70,000 available for its work. Tentative sites are under consideration now. The final decision as to location will be made as soon as the board of trustees is reorganized. The board's president, Dr. Robert J. Christie, of Quincy, died a short time ago.

In Ogle County, due to large hard-road appropriations, but a small tax was levied this year for sanatorium purposes. One-tenth of a mill, providing about \$1,800, was authorized. The sanatorium board plans at once to employ a full time community nurse, to make a survey and study of the tuberculosis problem, and also to create a permanent nursing and dispensary service. It is expected that a much larger tax levy will be made in 1918 in Ogle county.

In Champaign County a peculiar condition obtains. Although the people voted for a county sanatorium, the supervisors, when they met, failed to provide an appropriation for the project. The campaign in that county was not given the degree of publicity which should have been given, and the voters, apparently assuming there was no harm in it, gave it a sort of silent approval at the polls. The supervisors were far from informed as to the workings of the county sanatorium plan, so far the present passed it up entirely. Far better results in Champaign county are expected in the near future.

In Macon County the supervisors appropriated \$3,000 from the ordinary fund, without levying a special tax, for the purpose of employing county visiting nurses, two in number. The city of Decatur has appropriated sufficient money for the payment of one nurse's salary. It has been agreed that the three nurses shall work in cooperation, forming a service which in actuality will have the status of a county



service. Funds raised by private subscription and from the sale of Red Cross Christmas seals will be applied to the establishment of a free dispensary.

In Kankakee County the supervisors appropriated the salary of a nurse and privately donated funds will be used for establishment of a free dispensary and for work in connection with it.

In Livingston County \$10,000 by taxation has been authorized and this money will be applied to preliminaries of a country sanatorium project.

A committee of three has been appointed in McDonough County to consider the tuberculosis work. The supervisors of that county are taking an active interest in the problem.

Supervisors in several other counties are paving the way for steps in the near future toward crystallizing the sanatorium sentiment and reducing it to definite steps. Reports at the next meetings of the boards of supervisors are expected in these instances. McDonough county is one from which a report is looked for.

In Montgomery County serious consideration has been given to the matter of provisions for tuberculosis work within the county.

In Cass County steps are being taken to circulate petitions to bring the county sanatorium proposition to a vote at the fall election this year. It is expected petitions will be circulated in several others of the seventeen counties in Illinois which are not under township organization, and which, this fall, have general elections.

The Department of Public Health and the Illinois Tuberculosis Association are sending field representatives into counties that are interested, for the purpose of doing educational work. The State Tuberculosis Association is ready to take an active part in referendum campaigns, while the state department, through its division of tuberculosis and sanitary engineering, is giving practical service in the selection of sites, and advice on sanitary installations. Plans and estimates for model sanatoria have been secured by the state department, and these models are adapted to the counties wherein sanatoria are being established.

For the first time in Illinois' history there is now an active tuberculosis organization in every county, serving as a sub-committee of the general State co-operative committee, engaged in an heroic effort to aid the cause of eradicating tuberculosis from our armies, and of caring for returned tuberculosis soldiers.

The State Department of Public Health and the Illinois Tuberculosis Association have announced their readiness to help in every community. Their co-operation and assistance are responsible, to a large degree, for adoption of the sanatorium plan in the counties that have assumed it.

publish special material on the subject in the October issue, which will be on the press shortly. In this issue, and under authorization of the State Department of Public Health, which publishes the magazine, a general, yet frank treatise will appear, and with it the rules and regulations now operating in Illinois which aim to check so far as possible the spread of venereal disease.

These rules, adopted by the State Department of Public Health, become operative October 1, 1917. In a general way, they provide for the reporting of cases by physicians, placarding, quarantine, and they cover prohibited occupations and investigations.

Local health authorities are charged with enforcing the rules. Any physician, nurse, druggist or other person having knowledge of the existence of a known or suspected case of venereal disease in its infectious stage must report said case immediately to the local health authorities. The report form is given. Under certain conditions specified in the report, the name of the patient may be omitted, also his or her address. The probable source of the infection must be traced, if possible, and recorded. When a case is found in a place used for immoral purposes, the premises must be placarded, and the patient shall be subject to any reasonable isolation which may be prescribed ordered. Removal of the cases to a hospital for treatment is recommended. Patients are prohibited from following certain occupations, especially those in which food-stuffs are prepared. Venereal disease is defined in the rules as meaning syphilis in the infectious stage and gonococcus infection.

In this connection it may be of interest to note a statement found recently to the effect that Congress, as early as Revolutionary War times, took official cognizance of venereal disease as an army menace. While Washington's men were at Valley Forge, a law was passed fining officers ten days' pay, and privates four days' pay if they were found with infections. This probably was the first legal penalty imposed in the United States.

---

#### HEALTH OFFICERS ARE ASSIGNED

Director C. St. Clair Drake of the Illinois State Department of Public Health has announced the assignment of medical men in the service to their various districts and posts. A summary of the assignments follows:

Dr. C. W. East, relieved as medical health officer for Camp Grant district, and detailed to investigation of poliomyelitis in Cook county, after which he reports to Springfield for further orders. Effective Sept. 24.

Dr. Arthur C. Pearman, Rockford, appointed medical health officer for Camp Grant district, headquarters at Rockford. Territory embraced: Monroe, Brown, Marion and Scott townships in Ogle county; Cherry Valley, Rockford, Winnebago and Guilford townships in Winnebago county. Effective Sept. 24.

Dr. Alexander F. Stewart, Oneida; appointed district health officer for the Western Health District, headquarters at Galesburg. Territory: Rock Island,

---

#### VENEREAL DISEASES A SPECIAL FEATURE

In view of the extensive agitation of the question of prevention of venereal diseases in our military life, the editor of *Illinois Health News* has arranged to

Henry, Stark, Marshall, Woodford, Tazewell, Peoria, Knox, Mercer, Henderson, Warren, Hancock, McDonough, Schuyler and Adams counties. Effective Sept. 24.

Dr. John A. Kappelman, Chicago; relieved as medical health officer of Great Lakes-Fort Sheridan health district, excepting special duties in cooperation with Major John A. Robinson, and is detailed to Northeast health district, as district health officer, headquarters at Chicago. Territory embraced: Lake, Cook, Kane, DuPage, Will, Kendall, Grundy, Livingston, Kankakee, Iroquois, and Ford counties. Effective Sept. 24.

Major John A. Robinson, Chicago; appointed medical health officer for Great Lakes-Fort Sheridan health district; headquarters, temporarily at Lake Forest. Effective Sept. 28. Territory embraced: Benton, Waukegan, Shields, Deerfield, Libertyville and Vernon townships in Lake county.

Dr. C. E. Crawford, Rockford, assigned as district health officer to Northwest health district (excepting Camp Grant district temporarily), with headquarters at Rockford. Effective Sept. 28. Territory: McHenry, Boone, Winnebago, Stephenson, Jo Daviess, Carroll, Ogle, DeKalb, La Salle, Bureau, Putnam, Lee and Whiteside counties.

Dr. Edward M. Irwin, Belleville; appointed medical health officer for the Scott Field Health district, embracing the towns of Shiloh Valley and Belleville, St. Clair county. Effective Oct. 1.

Dr. C. S. Nelson, Springfield; assigned to North Central district, headquarters at Springfield. Effective Oct. 3. Territory: Vermilion, Champaign, Douglas, Moultrie, Piatt, McLean, DeWitt, Macon, Christian, Sangamon, Logan, Mason, Menard, Cass, Morgan, Macoupin, Scott counties.

Major E. L. Damron, Effingham; appointed district health officer for South Central district, headquarters at Effingham. Effective Oct. 3. Territory: Calhoun, Greene, Jersey, Madison, St. Clair, Monroe, Washington, Clinton, Bond, Montgomery, Shelby, Fayette, Effingham, Jasper, Cumberland, Coles, Edgar, Clark and Crawford counties.

Assignment to the South district has not been made.

#### SPRINGFIELD WORK IN POLIOMYELITIS

On account of the increased prevalence of poliomyelitis in the city of Chicago and in sections of Illinois adjacent to but beyond the jurisdiction of the city, Dr. C. W. East of the State Department of Public Health has been assigned to special investigation of infantile paralysis in cooperation with Dr. John A. Kappelman, state district health officer in charge of the northeast district.

This preventive work will be carried on in conjunction with district, the local health authorities and the local medical society.

Dr. East and Dr. Kappelman will have assigned to them nurses from the State Department of Public

Health and will have the cooperation of nurses of the Cook County Division of Social Service under the supervision of Miss Harriet Fulmer.

In dealing with infantile paralysis, the State Department of Public Health has adopted certain informal "articles of faith" upon which the activities of Dr. East and Dr. Kappelman are based. These "articles" intend that with proper caution on the part of parents and sufficient skill on the part of physicians, anterior poliomyelitis is susceptible to very early diagnosis, especially in times of epidemic. Second, it is held that if relatively simple procedure is religiously followed deformity may be avoided in the large majority of cases. The Department is specially anxious that the air of mystery which has surrounded the disease in the past shall be eliminated and that the present prevalence may be met with that calm level-headedness with which we have come to meet all other communicable diseases.

The Department of Health cautions all parents to look with suspicion upon any illness of a child during an epidemic of infantile paralysis and to secure medical guidance at once, and it calls the attention of the medical profession to the fact that severe and unusual pains such as headache and backache are rare in healthy children, and that tenderness or pain on being handled, a tendency toward instability in standing or walking and marked drowsiness should be looked upon as very suggestive of poliomyelitis.

The Department particularly advocates that children suffering from poliomyelitis shall be kept absolutely still until all tenderness is gone and that deformity be prevented through the use of comfortable but firm braces, padded splints or other simple appliances to retain in a natural position any member in which paralysis is developed.

---

#### URINARY ABNORMALITIES—CONTINUED

Certain bacteria are often found in the urine, among them streptococci, staphylococci, gonococci and occasionally colon bacilli. The functional tests show that normally 50 to 60 per cent of the coloring matter will be eliminated inside of two hours. Cases with primary renal diseases fall to 30 per cent or lower. Stengel of Philadelphia (*Jour. A. M. A.*, LXIII, 1466) states the phenolsulphonaphthalein test is of more value in distinguishing primary nephritis from that of secondary to cardiac weakness than it is in differentiating certain arterial cases from primary chronic nephritis. These cases show very few physical symptoms; yet the impressive fact remains that a high arterial tension is existing and a great many sudden deaths in our hospitals might be expected and accounted for if greater



attention was given to these two factors, namely, the high arterial tension and diminished function of the kidneys.

Since this is the age of prevention, it is the duty of the State to educate the public by bulletins, lectures and visiting nurses, pointing out the great fact that nephritis, which is increasing rapidly and causing many millions of dollars expense and loss of labor, can be prevented by beginning with the child in guarding its diet, exercise and mode of living. We, as physicians, should work for moderation in such things, especially with those persons whose occupation is sedentary.

What benefit are we to derive from these observations?

First, that by frequent examinations of the urine and by determination of arterial tension this terrible disease can be checked in the beginning, and by careful regulation in the mode of living, life may be prolonged.

Second. The figures given above suggest that the foremost prevalent psychoses showing abnormal changes in the urine in order of their prevalence are:

Dementia præcox, general paralysis of the insane, senile psychosis and epilepsy.

Third. While education in regard to importance of moderate living may be possible, such efforts are not likely to prove of value among the insane; it is rather for the staff physician to take such precautions as are outlined above.

## Society Proceedings

### ADAMS COUNTY

The September meeting of the Adams County Medical Society was a very sad one, owing to the demise of one of its most prominent and most beloved members, Dr. R. J. Christie of Quincy, and would have been postponed altogether, only that arrangements had to be made for Dr. Christie's funeral, and furthermore, Dr. Bertha M. VanHoosen of Chicago, had been invited some time previously to be the society's guest and take part in the scientific program. At it was, only the absolutely necessary business matters were attended to.

A committee of five, including the chair, was appointed to adopt resolutions on the death of Dr. R. J. Christie, a copy of the same to be engrossed and sent to Mrs. Christie.

The following were appointed: Drs. Shawgo, Stevenson, Ericson, Ball and Johnston.

Dr. Van Hoosen, who is well known to all the members of the Illinois State Medical Society, gave a very clear and interesting talk on "Shockless Obstetrics." She told how long she had been using scopolamine morphin anesthesia, how to use it in different cases and under various circumstances and the results she had obtained. It was the first time the subject had been discussed before our society, and many questions were asked at the close of the talk. Dr. Van Hoosen has used this form of anesthesia for so many years and with such marvelous success, that she is thoroughly conversant with its uses and abuses. A rising vote of thanks was extended to her before the meeting adjourned.

A letter received by the secretary from the president, (who is in camp at Fort Riley) and published in the "Bulletin," was referred to the president and secretary with power. This letter has to do with a bill before congress at the present time to place the Army Surgeon on an equal with the Navy Surgeon with a salary of \$3,250 per year instead of \$2,000 which he now receives. Adjourned.

ELIZABETH B. BALL, Secy.

## CHICAGO OPHTHALMOLOGICAL SOCIETY

### Meeting of April 16, 1917—Continued

DR. GEORGE F. SUKER differed in his opinion in regard to some of the statements made by Dr. Chance. In the Cook County Hospital there had not been a single case of extra-ocular complication in the last three years in pregnancy. There had been a good many cases of intra-ocular complications particularly in the later stages in those women who had an increased blood pressure and more or less diminished excretion of urine, although not typically a retention. Several such cases have occurred in the last year, one in particular, with an aluminuric retinitis, the woman becoming absolutely blind within 12 hours after the onset. She was aborted within a few hours after the definite recognition of the condition and within 72 hours had regained practically her normal vision. In this instance the condition was not associated with any hemorrhages, but simply an edematous nerve head which amounted to almost a choked disc. That was the only case with an intra-ocular complication in a series of over 2,100 cases. Yet, in looking over further statistics and going further back he did maintain that every pregnant woman in whom an aluminuric retinitis appears must be aborted, irrespective of the stage of pregnancy; because, if this is allowed to go on beyond four or five days or a week, irreparable damage will have been accomplished in the retina and blindness will result or a diminished visual acuity. Subsequent pregnancies play no part as to the causation. Each case is a law unto itself and the woman who had such a complication at one time may never have another.

In the large percentage of pregnancies an ophthalmic examination in the seventh or eighth month will show more or less enlargement or fullness of the veins. Not a few have a moderate retro-bulbar neuritis and this is necessarily an evanescent type and is probably often mistaken for an amblyopia of central origin or of the uremic type. These cases can be cared for without the termination of pregnancy.

In speaking of amblyopia several things must be remembered: first, is it a retro-bulbar neuritis type or a central blindness? If the latter the patient should certainly be delivered; if it is a toxic amblyopia this is not necessary.

The conical cornea occurs only as the result of repeated pregnancies, due to the devitalization which ensues. Dr. Suker believed repeated ophthalmoscopic examinations should be made in every pregnant woman.

DR. ALONZO C. TENNEY believed the cases requiring emergency treatment could be narrowed into a very few classes; the gradually developing aluminuric retinitis, the rapidly developing or acute retinitis, the retinitis which is associated with a

systemic disease, such as syphilis, and the keratitis associated with the tubercular diathesis or the edematous diathesis. In his experience the indications have been about as follows, speaking from the standpoint of the general consulting practitioner: the gradually developed retinitis may be controlled if caught early.

The appearance of albumin in the urine with a decreased urea and an increased ammonia ratio should indicate strict dieting with free elimination. These cases will almost invariably respond to treatment. The *acutely* developing cases, in patients who only a week or few days prior to this gave a negative urinary examination, require immediate emptying of the uterus. The cases which develop with systemic disease, which seem to be in some instances much more active when the patient's vitality is lowered, should never reach a critical stage if observed intelligently. By watching the urine (the decreasing urea coincident with the appearance of albumin in nephritis; the appearance of diacetic acid, acetone and creatinine in diabetes; and the discovery of lucine in cases with hepatic insufficiency) the warning may be obtained early enough to use dietetic and medical treatment, with a fair prospect of saving the mother's sight and the child's life.

DR. FRANCIS LANE said the pathological side of these cases was that the retina and choroid are thickened and soaked with a fluid exudate which is rich in fibrin. There is proliferation of the endothelial cells of the arteries with a thickening of the blood vessel walls.

DR. CHANCE, in closing, said he was not connected with any large charitable general hospitals. His observations had been drawn from consultations with general practitioners, who had sent to him patients from what might be called the self-supporting class. Such practitioners were not so well equipped, perhaps, for making the studies and early diagnosis as the obstetric experts here tonight. It was to draw the attention of the general practitioner to the gravity of the complications of pregnancy, as seen by the ophthalmologist, that he gave the survey of what has been reported as happening during pregnancy. He himself had not seen a case of meratoconus arising in the course of pregnancy in a primipara, although such cases have been reported. In his paper he devoted his attention to the conditions associated with toxemia. He had seen a number of cases where there had been vague symptoms, long before there was any necessity, in the minds of the men who had charge, for examining the urine. The primipara may not have the classical symptoms with vomiting in pregnancy. He urged that vague symptoms should always be considered; those which occur, perhaps, without vomiting. She may have headaches, but these the family physician puts aside as part of the derangement of economy. Such patients may come to the ophthalmologist later to have glasses fitted; then it is that lesions in the optic nerve and choroid are discovered. It is those cases who should have had early attention.

#### A BRIEF REPORT OF TWENTY-NINE CASES OF MONGOLIAN IDIOCY, WITH SPECIAL REFERENCE TO THE ETIOLOGY FROM THE STANDPOINT OF THE CLINICAL HISTORY, WITH PRESENTATION OF THREE CASES.

Dr. Mary E. Pogue stated that some authorities give from three to five per cent. and others as high as ten per cent. of the mentally deficient as belonging to this class. This defective mental development is the outcome of a brain made physically inferior. It had never been her privilege to know a Mongolian whose mental age tested by the Binet Intelligence Tests above the eighth or ninth year. As a class they are cheerful and pleasant to live with. They are highly imitative and each author who writes upon this subject speaks of their musical tendency. They have characteristic swaying movements, and Dr. Pogue believed Bianchi is right in reaching us to think of such symptoms in relation with epilepsy. Mongolians are born optimists; they have funny little traits and characteristics. The

effective element of consciousness is above the content.

She reviewed the physical characteristics of Mongolians and in discussing the rarity of Mongolism in children of Jewish parentage stated that it was interesting but of no special significance.

Commenting upon the relation of syphilis to Mongolism the author stated that she did not wish to be understood as not holding syphilis responsible and alone responsible for some cases of Mongolian idiocy. None of her patients gave a positive Wasserman reaction. If a specific infection is back of this, then the brunt of it may be borne by the endocrinal glands. Chemical attractions may exist between a certain strain and the endocrinal glands.

Dr. Pogue gave a brief review of the clinical history of four children with Mongolism and stated that she thought Mongolism is much more frequent than has formerly been believed. She believed certain mental symptoms occurring in the pregnancy of one of the mothers was due to her harboring a Mongolian. One of her twenty-nine cases of Mongolism married and twice conceived. She carried the first child four or five months and with the second came to term. The child was not a Mongolian.

As to glandular feeding, a circular letter was sent to a number of the foremost institutions in the country asking their results. In not one instance did they speak of having received the slightest benefit from it. However, Dr. Pogue felt strongly that it is of some benefit. Glandular feeding increases the stature in many instances, alters the nutrition of the hair and is of inestimable value in overcoming the digestive disturbances. She suggested that the extract of thymus gland be given almost at birth as a nutritional aid; after the third or fourth years thyroid, and about the tenth or twelfth years pineal gland.

Dr. Pogue likes to call this condition a psychosis and feels that it is not a problem that we can hope for education to answer. It is a research problem in medicine. We have been at the education side long enough to know its limitations and to frankly state them.

Our knowledge of the ductless glands is most imperfect, but enough light has dawned so that we now know that various ones of them are more active at different periods of life. If Mongolism is brought about by a pluriglandular insufficiency in a mother, whether or not the insufficiency of these glands was caused by some chronic infection, glandular feeding would probably help her.

#### EYE SIGNS AND SYMPTOMS OF MONGOLIAN IDIOCY.

Dr. Casey A. Wood said that this report was based on examination of eleven cases, and it also furnishes a review of the recent literature.

Fifty per cent. of Mongolian idiots show eye changes of various sorts, and these are mainly abnormal direction of the interpupillary fissure, epicanthus, blepharitis, ectropion, squint nystagmus and cataract.

The *relative position or direction of the interpupillary fissure* forms one of the general characters of



this mental defect. The fissure on each side is directed upwards and outwards in nearly two-thirds of the cases, giving a decided "Chinese" appearance to the unfortunate patient.

*Epicanthus* is a very common congenital anomaly in Mongolian idiocy and is found in about one-quarter of all the cases.

In three cases the epicanthic condition was well marked, and in one instance was associated with a marked, bilateral congenital stenosis of the lachrymal duct—the so-called infantile dacryocystitis.

*Blepharitis* is generally of the dry marginal type, and is thought by some observers to be due to the uncleanly habits of a certain class of idiots, who frequently rub their eyes, but this has not been the writer's impression of its causation and perpetuation. The facial skin, as a whole, is often not normal, and the dermal covering of the lid may exhibit the same characters and serve as a basis for the blepharitis; or it is perpetuated by ectropion and possibly by errors of refraction that are also frequently presented.

The *ectropion*, together with the scaly blepharitis, is found in nearly half the cases of Mongolian idiocy. The former is very likely due to a superficial contraction of the palpebral skin, which is often rough, glazed and quite dry. In one case this condition of the lids was well shown and gave rise to a good deal of trouble.

*Squint*, generally of the convergent variety, is quite frequently present and may be regarded as one of the stigmata of Mongolian idiocy. It occurred in three of the writer's small series. There does not seem to be anything special about the form of the strabismus and it is associated, as a rule, with the usual amount of hypermetropia.

Of *refractive errors* it may be added that an unusual degree of hypermetropia, generally associated with astigmatism, is common in Mongoloids.

*Nystagmus*, of the lateral variety, occurred in two cases.

*Cataract*. By far the most characteristic and most interesting concomitant ocular change in this form of idiocy are, however, lenticular opacities. These occur so regularly that they may be regarded as a veritable stigma of Mongolian idiocy, and when there is doubt as to the form of the mental defect in early infancy, he believes the fundus should be carefully scanned for the punctate form of the anomaly, because it occurs in more than half the cases.

One of the peculiarities of this dotted cataract is that it is not easy to discover in infants a few months old. The dots at this period are so translucent that they cannot always be seen by transmitted light. Later, they probably increase in number and in opacity so that their presence can readily be detected. They are always of incomplete form and appear in the lens layers occupied by the changes in ordinary lamellar cataract. They do not spread to the periphery of the lens, but take the form of a small, definite, discrete dot. In about one-quarter of the cases there is also well marked posterior polar cataract.

In the few cases examined there were no vitreous,

retino-choroidal or optic nerve changes, and the writer does not believe that alterations of this character belong to the ocular stigmata of Mongolian idiocy.

#### DISCUSSION.

DR. ARCHIBALD CHURCH said the first thing that forced itself on the attention in the consideration of Mongolian idiots was their striking similarity. After seeing a few cases it is almost impossible to mistake one for anything else. Vogt has said that parents coming to visit their children if presented with half a dozen cases are unable to recognize their own offspring. Whatever is the cause of Mongolian idiocy, it is uniform and definite, because the results are parallel.

Clinically they all have short, broad heads, a low bridge of the nose and the nostrils are flaring. The tongue is rugose. The fontanelle almost always closes early, the stature is below par, and the condition of the bones is peculiar. In one extremity you may find the changes that suggest giantism next to a bone in which ossification is retarded. The hands are spade-shaped and the terminal phalanges stubby with short broad nails. The tendons and ligaments are always relaxed and the fingers can be put back on the dorsal surface of the hand without producing any inconvenience. Cleft palate, extrophy of bladder, hernias, hypospadias, and crypt-orchidism are common. These children are defective, unfinished products, the genital development is backward and sexual differentiation incomplete. The case reported by Dr. Pogue where the girl married and had children is unusual.

They nearly all die before reaching middle age and very often of tuberculosis, which means nothing as to causation. As to syphilis, Dr. Church had tested a number of cases serologically in recent years and they had all been negative. X-ray pictures of two cases showed that the sella turcica was not enlarged and there was no indication of any pituitary disease, nor disturbance of the pineal gland. Pineal gland feeding had been used to stimulate growth in these cases, at first with apparent advantage, but the latest view is that the pineal is not glandular and that it has no effect on stimulating growth either in adolescence or infancy. Thyroid has also been tried in many cases without noticeable effect. Usually the skin is velvety or infantile, but has not the rubberoid condition found in myxedema. The mental condition is entirely different. These patients are bright and affectionate; they have powers of appreciation and pleasurable emotion; they enjoy the attention that is lavished upon them and suffer if neglected. As to whether the sex glands are at fault or some of the other glands of internal secretion is as yet undetermined but probable.

Anatomically more defects of the heart are found than of any other organ; persistent ductus arteriosus and lateral openings between the ventricles and auricles are common. Many of them are "blue babies." Their tissues are of low survival value and do not resist infection well. The tendency to cataract is perhaps an expression of the same inherent defect.

Dr. Church believed this disease was not a race condition, or due to syphilis, or tuberculosis, or alcoholism on the part of the parents, and that when we know the cause of disease of the endocrin glands we will know the cause of Mongolian idiocy.

DR. BURTON CHANCE asked if Dr. Pogue had noticed disease of the cornea in this class of patients; and he mentioned that he had seen within the year five or six such patients, none of whom had been in institutions. One boy had had a persistent keratitis and also the inflammation of the lids of which Dr. Wood spoke. A girl has been under his observation for probably 15 years; she was supposed to be nine years of age when she was first brought, and is now declared to be only 14, for nobody knows how old she is. She had had a definite keratitis; and, the Wasserman reaction was positive. She did not do well under mercurial treatment, but when she was given thyroid her general health improved, although she did not grow taller. Menstruation occurred at about the time she was believed to be 14; very scantily and irregularly, the patient sometimes going for a year without a period. He thought it strange that observers have found so few congenital structural defects in the eyes of the idiotic.

DR. CASEY A. WOOD asked if Dr. Pogue had noticed that

the Mongolian idiot was dirty in his habits—whether they were apt to rub dirt into the eyes or put their dirty fingers up in their eyes?

DR. POGUE, in answer to Dr. Wood, said that Mongolians were not dirty in their habits, but cleanly; the condition of the eyelids being due to a defective development of the skin and its appendages. She had never had a case who rubbed their eyelids or eyebrows. In institutions practice they always had institutional keratitis, but in private practice she had never had it.

The average Binet age is between two and five years and sex manifestations of any degree could not be expected. She agreed with Dr. Church that when we know more about the endocrin glands we will know more about this disease, but she doubted if one and the same condition could ever be held responsible for it. In one case she had had x-rayed there was an evident enlargement of the pineal gland and in another there was enlargement of the thymus.

### CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held on Tuesday evening, April 17, 1917, at 8 o'clock in the gentlemen's cafe annex of the Palmer House.

The president, Dr. Stanton A. Friedberg, in the chair.

Dr. Joseph C. Beck presented a patient who had a perforation of the septum as large as the end of the thumb, the etiological factor of which was not proven. There was no evidence of its being syphilitic. Dr. Ballenger had tried unsuccessfully to heal it by transplantation of cartilage. Dr. Beck had subsequently made several attempts, one by transplanting the middle turbinate body into the space, but without results. He had later succeeded very well in closing the perforation by bringing forward the ends of the inferior turbinate body, the posterior end on one and the anterior end on the other. At the time of presentation the left anterior body passed through the anterior part of the perforation into the right nostril and sutured to the edge of the margin of the perforation. All that remained to be done was to cut the pedicle half off the posterior end of this turbinate before placing it with the margins of the perforation. This was the first perforation of this size that Dr. Beck had succeeded in closing, and the patient was presented to demonstrate that even large perforations may be closed. He had used the inferior turbinate body in a similar way in closing a cleft in the hard palate which would have been very difficult to close otherwise, and found that it would heal beautifully if its edges were made raw. He expected to finish the operation in this patient and later show the end results. The transplant acted as an obstructing agent at the time of presentation, but this would not be the case later when it was trimmed down to the desired size.

Dr. Samuel Salinger read a paper entitled

### SUBPERIOSTEAL ABSCESS OF THE MASTOID: CURE BY PARACENTESIS

The author presented the histories of two cases of subperiosteal abscess of the mastoid occurring in children twenty-two months and four years of age,

respectively, where resolution took place through the simple procedure of paracentesis and local antiphlogistic measures. In both instances the infection was acute (three days in one and two weeks in the other) and discharge from the ear was absent up to the time of the paracentesis. The symptoms were classic; pain, tenderness, temperature, protrusion of the auricle with edema and fluctuation over the mastoid. In the younger of the two the drum membrane was unchanged except for a mild injection of the blood vessels; in the other the drum was of deep purplish color and markedly bulged. After paracentesis there was a profuse discharge with relief from all symptoms, including the edema and fluctuation, and resolution was complete in three and four weeks, respectively.

The vital factor in the cure of these cases was undoubtedly the patency of the squamo-mastoid suture which, offering a ready atrium for the escape of pus from the middle ear and antrum to the periosteum of the mastoid cortex in the presence of an unruptured drum, served in a similar manner as a passageway for the pus to return to its original focus and drain through the middle ear after the drum had been incised. This suture, which marks the union of the squamous bone with the mastoid portion of the petrous bone in the embryo, remains more or less patent in over 50 per cent. of all children under two years of age and in a similar percentage beyond that age, as shown by a review of the literature. This anatomic fact in connection with the relatively greater resistance of the infantile drum membrane, as demonstrated by the Bruhl, as well as the tendency of the eustachian tube to occlusion through incomplete development of its cartilaginous portion, explains the comparatively frequent development of subperiosteal abscess of the mastoid in young children in the absence of any perforation. These cases may develop without a true osteitis of the mastoid bone, which accounts for their spontaneous cure following the establishing of drainage through the middle ear and drum membrane.

In considering the treatment of subperiosteal abscess of the mastoid, one must be governed by the attendant circumstances. Where the case develops in a young child with or without symptoms of acute suppurative otitis media and there are no threatening symptoms referable to the brain, the sinus, or the labyrinth, the drum membrane being unruptured in spite of fluctuation and edema behind the auricle, it is safe to defer the classic Wilde incision until thorough paracentesis and local antiphlogistic measures have first been instituted.

### DISCUSSION.

DR. OTTO J. STEIN thought that probably a good many such cases as Dr. Salinger described were seen without being recognized. He had observed a similar case a good many years ago which led him to think that the abscess originated through the squamous mastoid. In that case he discovered that the abscess had developed by dissection along the roof of the auditory canal. He saw another case a few years later and thought this route should be taken into consideration as one along which pus may reach the surface of the cortex by



dissection along the canal wall, its entrance being through a defect in the tympanic ring or via the Rivian notch, in that way producing all the manifestations of a perforation through the cortex. In such cases where the drum has not ruptured it is feasible that resolution may result without operating on the mastoid.

DR. JOSEPH C. BECK thought the fact that the essayist's case got well spoke well for the treatment. Mention was made in the paper of statistics by men like Hakaza Kanazugi, who has done many more operations than was mentioned. He has supplemented his studies of the mastoid with x-rays of the skull and found many of them of great interest. The essayist in his paper said nothing in reference to making a diagnosis by x-ray. The statement that there are no mastoid cells until a certain time in life is constantly mentioned in older papers in the literature, but is not borne out by operations on infants, many of whom have large mastoid cells. The Roentgen diagnosis of the mastoid proper in cases such as Dr. Salinger reported is very important. Just because these two cases recovered without operation at this time is a question whether it is as well as if an incision had been made and the antrum opened. The deep parts of the opened mastoid cannot drain well through the antrum and into the middle ear. In such cases as the Doctor described if it was only a passage of pus through the sutures the x-ray would show it.

DR. SALINGER, closing, said the point made by Dr. Stein was very well taken; the pus may reach the cortex by means of the auditory canal but, according to Mygind, there are symptoms along the canal which would point to that. In his cases those symptoms were not present.

Dr. Beck had misunderstood him regarding the pneumatization of the mastoid. He had said that according to the authors who studied it this was not complete until the age of puberty, but that did not mean that there were not mastoid cells before that age. As to x-rays, he was unfortunate; one case was treated at home and the other was taken away from the hospital before he had an opportunity to do much with it. The x-ray would undoubtedly have shown the existence of the sutures.

Dr. Otto J. Stein read a paper entitled:

#### REPORT OF A CASE OF NASAL SARCOMA CURED BY RADIUM.

The patient was a man aged twenty years who was first seen July 2, 1916, when he complained of complete nasal obstruction, profuse attacks of epistaxis and severe headaches. Poorly nourished and anemic, a mouth breather, and the right eye protruded so that the lids could not cover the ball; the anterior nares were excoriated from nasal discharge, the nasal bridge widened and tissues round about thickened, giving the frog-like facies. The right nostril was entirely blocked by a pale colored, fairly hard, mass excepting in spots where there was local necrosis, showing areas of sloughing surrounded by hemorrhagic oozing. The tissue bled freely on manipulation or application of adrenalin. Apparently the tumor originated from the right ethmoid region. The septum was intact with no adhesions between it and the tumor; the left nostril was not invaded. The naso-pharynx was entirely filled by the tumor plugging both posterior nares, but a probe introduced into the left nostril could be passed around the mass in the epipharynx. Bleeding always followed such instrumentation. The right sinuses showed dark on transillumination and skiagraph demonstrated shadows in the region of the right antrum, ethmoid and nostril.

(Continued Next Month)

### IROQUOIS-FORD COUNTIES

The regular quarterly meeting and dinner of the Iroquois-Ford County Medical Society was held Tuesday, September 4, 1917, at the New Gibson Hotel, Gibson City, Illinois.

Dinner at 12:30 p. m.

#### Program

"Medical Men and the War"—Major E. B. Cooley, M. D., President Illinois Medical Society.

"Acute Infection of the Maxillary Sinus"—C. W. Geiger, M. D., Kankakee.

"Liquid Petroleum as an Antiseptic"—H. D. Junkin, M. D., Milford.

Fifteen members and four visitors were present.

W. L. COTTINGHAM, M. D., Secy.

### MADISON COUNTY

The Madison County Medical Society met at the Harrison Tuberculosis Colony at Collinsville on August 3, 1917. In the absence of the president and vice-president, Dr. W. H. C. Smith was called to the chair.

Drs. Walter K. Vaught, of Livingston, A. P. Meriwether, of St. Jacob, and Edward K. Allis, of New Douglas, were elected members.

At the conclusion of the program Dr. R. B. H. Gradwohl, of St. Louis, read a paper on "The Value of the Blood Test for Tuberculosis in Practice." Owing to a threatened storm this paper did not receive the attention it deserved, and there was no discussion.

Refreshments were served by Dr. and Mrs. Marri-son.

On motion adjourned to meet in Highland on the first Friday in September.

### Personals

Dr. Thos. A. Hogan, Chicago, is temporarily at 547 41st street, Oakland, Cal.

Dr. and Mrs. Roy C. Pope, Springfield, motored to Canada and return.

Dr. and Mrs. E. K. Dimmitt, Farmington, have returned from a vacation in Colorado.

Dr. A. W. Daggett, Du Quoin, suffered a fracture of the leg recently.

Dr. Thomas F. Weldon, of New York, recovered from aphasia of over a week's duration at the Chicago Psychopathic Hospital.

Dr. Clara Hayes of the Peoria State Hospital has been appointed superintendent of the State Training School for Girls, at Geneva.

Dr. and Mrs. Archibald Church, Chicago, have returned from Les Cheneux Islands, where they spent the summer.

Dr. John W. McGuire, M. R. C. U. S. A., president of Englewood branch, Chicago Medical Society, is stationed at Fort Riley.

Drs. Frank Billings and Wilber E. Post of the Red Cross Commission to Russia, are expected home this month.

Dr. John Ridlon has been commissioned major, M. R. C., U. S. Army, and assigned to special work in orthopedic surgery.

Dr. J. Clarence Webster, who was operated on some months ago, and who has been convalescing in Canada, has returned to Chicago.

Dr. Daniel W. Rogers, Chicago, has been commissioned major, M. C., Ill., N. G., and assigned to the Third Artillery.

Major Coolley, president of the Illinois State Medical Society, appeared on the announcements of the meeting of the Iroquois-Ford County Medical Society as "Major General."

Dr. Thomas P. Foley, secretary of the Douglas Park branch of the Chicago Medical Society, has received his commission of Captain and has been detailed to duty at Fort Snelling, Minn.

Dr. Charles M. McKenna, who has been ill for the past two months following a Roentgen-ray burn, was recently operated on and is now convalescent.

Dr. Frederick A. Baldwin has resigned as pathologist and bacteriologist of the City of St. Louis to assume full charge of the Virchow Laboratory, 3700 Morgan street, St. Louis.

Dr. Hiram J. Smith, assistant superintendent of the Anna State Hospital, has been appointed superintendent of the Illinois Charitable Eye and Ear Infirmary; vice Dr. J. L. O'Connor, resigned.

Dr. George D. J. Griffin, Chicago, has accepted nomination as a member of the General Committee of the State Council of Defense. The nomination was made at a meeting of the State Council of Defense on August 28.

The following is the medical staff of the newly organized Eleventh Infantry: Major B. McPherson Linnell and Lieuts. Walter H. Meents, Claude H. Searle, Wilmette, and Louis B. Cardwell.

Dr. Thomas B. Knox was tendered a banquet by the Adams County Medical Society, at the Hotel Quincy on the occasion of his transfer from Fort Riley to Wrightstown, N. J., where he was appointed surgeon of the regimental engineer corps.

Doctor William D. Napheys has received a commission in the Medical Reserve Corps, as Captain and has been sent to Fort Riley, Kansas, to be the ranking officer and be in charge of the Neurological and Psychiatric Department at that point.

Our attention has been called to an error in the August JOURNAL attributing the appointment of Lieutenant Hamburger as head of the Tuberculosis Board. Lieutenant Hamburger is head of the Cardio-Vascular examiners. First Lieutenant Samuel M. Marcus was appointed head of the Tuberculosis examining board.

Dr. Dean D. Lewis, director of Base Hospital No. 13, gave an address on "Organization and Operation of a Base Hospital," September 13, before the Medical Woman's Reserve Chapter of the Navy League. September 18, Dr. Lewis was the guest of honor at the Kewanee Rotary Club dinner.

---

## News Notes

---

—The Chicago College of Medicine and Surgery was merged with the department of medicine of Loyola University (Bennett Medical College), September 21.

—Sir. Berkeley Moynihan, of Leeds, England, is expected to attend the war session of the Clinical Congress of Surgeons, at Chicago, October 22-29.

—Dr. C. N. Leigh has been appointed by Mayor Thompson as City Physician. Dr. Leigh is in every way fitted for this position, and will give a clean cut administration of his office.

—The National Housing Association in association with the City of Chicago and Chicago Civic and Social Service Organizations will hold its Sixth National Conference, October 15-17, at the Hotel La Salle.

—Nearly 100 women physicians, at a meeting held in the rooms of the State Council of Defense. September 22, volunteered to assist in the regis-



tration of Chicago women for war service. The registration week will begin November 5.

—The Post-Graduate School of Chicago has acquired from the Northwestern University a lot 50 by 105 feet, east front, 50 feet south of its present building, for \$15,500, to erect an addition to the hospital.

—The Tri-City Medical Society of La Salle, Peru and Oglesby, passed a resolution, September 12, pledging a hundred dollars a month to be paid any of its members called into war service by the rest of the members, during his military service.

—Sylvan Sommers, recently said to have been a lieutenant in Ambulance Company No. 1 of the Illinois National Guard, and claiming to be a physician, has been arrested and turned over to United States authorities on the charge of selling habit-forming drugs. Investigation showed that he is not a physician.

—The annual meeting of the "Soo" Surgical Association will be held in Chicago, October 22 and 23, 1917, the first two days of the meeting of the Clinical Congress of Surgeons of North America. The meeting will be clinical in character, and various sessions will be held in hospitals and other institutions in the city.

—Twenty-five instructors from the Medical School of the University of Illinois, Chicago, have entered the medical service of the United States Army. This shortage may compel the shortening of the curriculum. President Edmond J. James of the university anticipates a decrease of 35 per cent. in the attendance at the school this fall.

—An official register of drugless practitioners in Illinois, officially referred to as "Other Practitioners," has been issued by the Illinois State Board of Health. The list contains the names of 1,513 such practitioners who were licensed prior to July 1, 1917, when the licensing of all practitioners of healing was transferred from the state board of health to the new department of registration and education.

## Marriages

LIEUT. PHILIP M. BEDESSEM, M. C. Ill. N. G., to Miss Marie Foley, both of Chicago, August 4.

RALPH KING, M. D., to Miss Nana Wharf, both of Chicago, September 4.

ARVID E. KOHLER, M. D., to Miss Hazel Giles, both of Moline, Ill., September 15.

VICTOR HUGO LINDLAHR, M. D., Chicago, to Miss Sarah Goker, Atlanta, Ga., August 22.

HANS NACHTIGALL, M. D., to Miss Annamarie von Frantzius, both of Chicago, August 20.

FRANCIS XAVIER WALLS, M. D., to Mrs. Livingston T. Dickason, both of Chicago, in New York City, September 4.

CAPT. EDWIN MORTON MILLER, M. R. C., U. S. Army, to Miss Blanche Guthrie of Chicago, September 8.

HUBERT FRANKLIN MEACHAN, M. D., Oak Park, Ill., to Miss Genevieve Mason, of Chicago, recently.

## Deaths

RAYMOND LEONARD FESER, M. D., Chicago; Loyola University, Chicago, 1915; aged 25; died at his home, August 25, from pneumonia.

HENRY DINKEL HEIL, M. D., Decatur, Ill.; Rush Medical College, 1887; aged 59; died at his home, August 27, from heart disease.

LEROY FREDERICK MORSE, M. D., Cobden, Ill.; Dartmouth Medical School, Hanover, N. H., 1863; aged 78; died in the Anna State Hospital from enterocolitis, July 7.

ERNEST J. DUNCAN, M. D., Olive Branch, Ill.; St. Louis College of Physicians and Surgeons, 1902; aged 38; was shot and killed at Olive Branch, August 25, by a lad who said that he and his sister had been mistreated by Dr. Duncan.

ANDREW STEWART, M. D., Chicago; McGill University, Montreal, 1883; L. R. C. P. (Lond.), 1884; aged 57; a Fellow of the American Medical Association, and for several years a member of the faculty of the Collège of Physicians and Surgeons, Chicago; died at his old home in Howick, Que., about September 8.

WILLIAM HENRY REEDY, M. D., Bloomington; Rush Medical College, Chicago, 1876. Aged 71. Member of the McLean County Medical Society. For forty years a general practitioner at Towanda, Ill., from which he retired and in 1908 removed to Bloomington, Ill., where he died on August 21 of a heart affection.

ROBERT J. CHRISTIE, M. D., Quincy, Ill.; University of Pennsylvania, Philadelphia, 1890; aged 53; a Fellow of the American Medical Association; a member of the Illinois State Medical Society, the Western Surgical Association, and the American College of Surgeons; died suddenly, September 8, from cerebral hemorrhage.

J. MORGAN SIMS, M. D., Collinsville, Ill.; University of Louisville, Ky., 1890; aged 48; a Fellow of the American Medical Association; for many years coroner of Madison County, Ill.; medical superintendent of state hospitals for the insane at Lakeland, Ky., and Little Rock, Ark.; while under treatment at the Alton (Ill.) State Hospital, August 16, committed suicide by jumping from the roof of a sun porch.



## Obituary

---

DR. AUGUST H. ARP.

On the morning of September 14th, Dr. August H. Arp died very suddenly at his home in Moline. In his death the Illinois State Medical Society has lost a staunch member. He represented the fourth district in the Council, and his loss to the executive body is great. His ability as a business man particularly fitted him for service in the Council, and his demise will be a blow to that body.

Dr. Arp was probably the best known and most favorably known doctor in western Illinois. He was a man of action—a man who did things—who was interested in the civic life of his community, and who did his full service for the welfare of community and state.

Dr. Arp was chief surgeon for nearly all of the large industrial concerns of Moline. He attended personally to a very large practice in addition to his industrial work, and overwork is stated to have been one of the prime factors causing his death. He prescribed rest for others, but never for himself. His body was laid to rest in the Mausoleum of Riverside Cemetery.



## Book Notices

**MANUAL OF THE DISEASES OF THE EYE.** For Students and General Practitioners. By Charles H. May, M. D., Director and Visiting Surgeon, Eye Service, Bellevue Hospital, New York; Attending Ophthalmic Surgeon to the Mt. Sinai Hospital, New York; Consulting Ophthalmologist to the French Hospital, to the Italian Hospital, New York; and to the Monmouth Memorial Hospital; formerly Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Ninth edition, revised, with 377 original illustrations, including 22 plates with 71 colored figures. New York. William Wood & Co. 1917. Price, \$2.50.

This ninth edition of May adheres strictly to the plan laid out by the author, of providing a manual for the use of the student and general practitioner. No pretense is made for anything else. As such, it is one of the best manuals before the profession, and its popularity will undoubtedly be increased by this new edition. It is thoroughly modern, amply illustrated, and well printed. It can be recommended as an authoritative work.

**THE CONVERSION OF HAMILTON WHEELER.** A Novellette of Religion and Love, Introducing Studies in Religious Psychology and Pathology. By Prescott Locke. The Pandect Publishing Company, Bloomington, Ill. 1917. Price, \$1.25.

This interesting novelette, which is really a scientific work in story form, should be read by every physician who is interested in the psychology of religion and of its pathology. The author has, in story form, given us the baneful effects upon the susceptible mind of religious revivals, and the relationship of religion to psychopathology. The psychologist will recognize the figure of Hamilton Wheeler in his own patients, and to the physician who only occasionally meets him, it will clarify and elucidate many phases that before were unexplainable. The time spent in reading this book will be time well spent.

**SANITATION FOR MEDICAL OFFICERS.** By Edward B. Vedder, M. D., Lieut.-Col., Medical Corps, U. S. A. Medical War Manual No. 1. Authorized by the Secretary of War and under the Supervision of the Surgeon-General and the Council of National Defense. Illustrated. Price, \$1.50. Lea & Febiger, Philadelphia and New York. 1917.

This book is the first of a series of War Manuals which have been authorized by the Secretary of War and are under the supervision of the Surgeon-General and the Council of National Defense. It is pocket size and necessarily brief and concise, but to the point. It is interleaved with blank pages for notes, enabling the medical officer to add new matter or orders. It will, undoubtedly, form a part of every medical officer's equipment.

**THE PRESCRIPTION.** Therapeutically, Pharmaceutically, Grammatically and Historically Considered. By Otto A. Wall, Ph.G., M. D., Professor of Materia Medica, Pharmacognosy and Botany in the St. Louis College of Pharmacy; Member of the Committee for Revision of the Pharmacopoeia of the United States, 1880-1890 and 1890-1900; Second Vice-President of the Convention for the Revision of the United States Pharmacopoeia from 1900-1910; Presiding Officer of the United States Pharmacopoeia Convention of 1910; one of the Authors of the "Companion to the United States Pharmacopoeia"; Author of "Handbook of Pharmacognosy", "Lessons in Latin," etc. Fourth and revised edition. Price, \$2.50. C. V. Mosby Company, St. Louis. 1917.

The present edition of Wall, divided into five parts and an appendix, thoroughly covers all that should be known about a prescription. The divisions, general consideration, weights and measures, language, extemporaneous prescriptions, history of the prescription and appendix, thoroughly elucidate each part or parts of the prescription. It should be in each doctor's and student's library, and should be often consulted.

**DISEASES OF THE NERVOUS SYSTEM.** A Text-Book of Neurology and Psychiatry. By Smith Ely Jelliffe, M. D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital, and by William A. White, M. D., Superintendent of St. Elizabeth's Hospital, Washington, D. C.; Professor of Nervous and Mental Diseases, Georgetown University; Professor of Nervous and Mental Diseases, George Washington University, and Lecturer on Psychiatry, U. S. Army and U. S. Navy Medical Schools. Second edition, revised, re-written and enlarged. Illustrated with 424 engravings and 11 plates. Price, \$7.00. Lea & Febiger, Philadelphia and New York. 1917.

The names of the authors are a guarantee of the worth of this volume. It has been the aim of the authors to furnish a text-book that would be the last word in nervous diseases, and they have succeeded.

Numerous changes and additions, necessitated by the increasing amount of literature, especially on the vegetative systems, the endocrinopathies and warfare injuries, have been made. The diseases of the mind have likewise been augmented.

For those of the profession seeking a modern text-book on nervous diseases, Jelliffe and White should come to mind.

**A TEXT-BOOK OF ANATOMY FOR NURSES.** By William Gay Christian, M. D., Professor of Anatomy, Medical College of Virginia, Richmond. With 34 original illustrations, 5 of which are in colors. Price, \$1.75. C. V. Mosby Company. St. Louis. 1917.

This text-book of anatomy, written for the nurse, entirely fulfills its function. It is well written, easily understood, and well illustrated. It can be recommended as a suitable text-book for nurses.

**DISEASES OF THE SKIN.** By Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas, School of Medicine; former Chairman of the Dermatological Section of the American Medical Association; Member American Dermatological Association; Assistant Surgeon, United States Navy, retired; Dermatologist to the Christian Church Hospital. With 833 illustrations and 8 colored plates. Second edition, revised and enlarged. Price, \$6.50. C. V. Mosby Company, St. Louis. 1917.

It must be gratifying to the author that a second edition is necessary within a year. This new edition which has been enlarged by one hundred pages, corrected and revised, can be classed as one of the best. The illustrations are very numerous, and ably demonstrate the various lesions of the skin.

New matter such as gangrenous balanitis, atrophy of the mucous membrane of the tongue and mouth, and atrophy of the fatty layer of the skin, has been added. We believe the popularity of Sutton will be greatly increased by the present edition.

**OBSTETRICS FOR NURSES.** By Charles B. Reed, M. D., Obstetrician to Wesley Memorial Hospital, Chicago; formerly Obstetrician to German and Cook County Hospitals, and late Assistant of Obstetrics in Northwestern University Medical School; Member and Former President of Chicago Gynecological Society; Member of Chicago Institute of Medicine; Fellow of American College of Surgeons. 375 pages, with 135 illustrations. Price, \$2.50. C. V. Mosby Company, St. Louis. 1917.

This very practical text-book for nurses is well written and well illustrated. It is a book that can be used with entire satisfaction by the nurse.

**THE PRACTICAL MEDICINE SERIES.** Comprising 10 volumes on the year's progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the N. W. University Medical School. Price, yearly, \$10.00.

**VOL. 4. GYNECOLOGY.** Edited by E. C. Dudley, A. M., M. D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospital, Chicago, and by S. S. Schochet, M. D., Instructor in Gynecology, Northwestern Medical School, Chicago. Price, \$1.35.

**VOL. 5. PEDIATRICS.** Edited by Isaac A. Abt, M. D., Professor of Pediatrics, Northwestern University

Medical School; Attending Physician Michael Reese Hospital, with the Collaboration of A. Levinson, M. D., Associate Pediatrician, Michael Reese Hospital.

**ORTHOPEDIC SURGERY.** Edited by John Ridlon, A. M., M. D., Professor of Orthopedic Surgery, Northwestern University Medical School, with the Collaboration of Charles A. Parker, M. D. Price, \$1.35. Series 1917. The Year Book Publishers, Chicago.

The object of these volumes, which is to furnish a review of the literature on the various subjects in medicine, has been fully performed. The editors are all men eminently capable and well selected. The series should be regularly subscribed for.

**PREVENTIVE MEDICINE AND HYGIENE.** By Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard; Director of the School for Health Officers of Harvard University and the Massachusetts Institute of Technology; formerly Director of the Hygienic Laboratory, U. S. Public Health Service, etc. With Chapters upon: Sewerage and Garbage, By George C. Whipple, Professor of Sanitary Engineering, Harvard; Vital Statistics, By John W. Trask, Assistant Surgeon-General, U. S. Public Health Service; Mental Hygiene, By Thomas W. Salmon, Medical Director, National Committee for Mental Hygiene, etc. Third Edition. Containing a Special Section on Military Hygiene. D. Appleton and Company, New York. 1917.

The author of this work needs no introduction, and his name is guarantee for the value of the book. The work is rather voluminous, and is not written as most medical books are written. The book will not be valuable on account of the new material contained in it, but rather for the vast amount of information, gathered from everywhere, put in an easily readable form, and made ready for practical use.

The first part deals with hygiene, and discusses the questions of immunity and of prevention of the communicable diseases. This includes chapters on venereal prophylaxis, heredity, and other kindred subjects.

The second portion studies the many angles of sanitation. Good health depends largely upon environment. In these chapters are discussed the questions of food, water, air soil, occupation, quarantine, disinfection, and a large number of other subjects, all of which are public health questions.

A considerable portion of the work is devoted to military hygiene, and deals with those questions especially applicable to maintaining the health of the armies.

All public health workers will be interested in the work. We predict this third edition will be equally popular with its predecessors.



# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL XXXII

CHICAGO, ILL., NOVEMBER, 1917

No. 5

## Original Articles

### INDIVIDUALIZATION IN THE TREATMENT OF SURGICAL INFLAMMATIONS.\*

EDWARD H. OCHSNER, M. D., B. S.  
Attending Surgeon, Augustana Hospital,  
CHICAGO.

In the economy of Nature every plant and animal seems to have one or more deadly enemies. If this were not true, then some one animal or plant would soon overrun at least that portion of the earth's surface in which the environmental and climatic conditions are propitious. If the above general statement is true, however, then we should be able to find a specific germicide for each microorganism which attacks man. In addition, these germicides should not be toxic to the human species.

The horticulturist has spent much time and money in finding a definite spray for every parasite that attacks his trees. In medicine, dermatologists have probably sought most assiduously and most successfully for a definite application for each particular kind of skin lesion, be it parasitic or non-parasitic. I sometimes wonder whether surgeons have shown the same diligence in looking for a definite specific antagonist for each one of the considerable number of bacteria that cause surgical inflammations and saprophytic infections. My own personal observation is that many general practitioners and even some surgeons have some "cure-all" application which they apply in all or nearly all cases of surgical inflammation irrespective of the nature of the infection or the species of the bacteria which may be the specific cause of the disturbance. The various lotions and ointments and other methods of treatment thus employed are probably all of value in certain definite infections, but it is not

likely that any one of them is equally effective in all forms of infection. To the contrary, I believe that the wrong remedy may actually do harm. Thus, for instance, while we consider quinine a specific in malarial chills, I am convinced that it is a very dangerous drug in septic chills because it greatly reduces the phagocytic power of the white corpuscles. Again various wet dressings are of benefit in some types of infection, but are contra-indicated in impetigo contagiosa because they usually cause this infection to spread.

A certain amount of routine in surgery is unavoidable and may even be of real value, but too much routine is deadly. It kills the enthusiasm of the surgeon, making him a mere human machine and also unnecessarily kills some of his patients, making them mere corpses.

No practical orchardist would think of using the same spray in combating all the pests and fungi that attack his trees and shrubs. Is it not time that surgeons display as much judgment in their work as do horticulturists in the management of their orchards? It took the general surgeon many years to learn that a tubercular abscess must be treated differently from a collection of ordinary pus and I find that even now some surgeons have not learned their lesson very well. I cite the above illustration to emphasize as strongly as I possibly know how the necessity of making a definite bacteriological diagnosis in each case of septic infection and wound infection and then applying the treatment found most effective, for I feel that our clinical studies and chemical and bacteriological investigations have taught us which remedies are most effective in overcoming many of the surgical inflammations to which the human body is liable.

My two years' experience as student assistant in the dermatological clinic of the late Professors Hyde and Montgomery first aroused my interest in this subject and for over twenty years I have been trying to determine what specific form of

\*Read at the meeting of the Illinois State Medical Society at Bloomington, Ill., May 9, 1917.

treatment is most effective in each one of the various types of infection.

The general therapeutic agencies, such as rest of the individual, rest of the affected extremity with the muscles at equilibrium, avoidance of mixed infection, elevation, drainage, proper elimination and general hygiene have been considered elsewhere and will not be discussed here. This paper will deal mainly with specific remedies and local applications that have been found by others as well as myself, as most efficacious in the various infections. Because of the length of the subject, I shall only give conclusions today, leaving reasons for these conclusions and the report of clinical cases for a larger monograph.

*Gas bacillus, anthrax, glanders.* With these I have had no personal experience and so far as I know no specific remedies have been discovered for any of them.

*Rabies.* In dog, cat, wolf or skunk bites, lay the wound wide open, apply a piece of gauze saturated with Churchill's tincture of iodine, leaving it on ten or fifteen minutes even at the risk of slight vesication, then apply 50 per cent. of alcohol in water dressing. If the biting animal has been found rabid or has been lost track of, use Pasteur treatment immediately.

*Tetanus.* For wounds likely to be contaminated with the tetanus bacillus, lay the wound wide open, remove all foreign bodies such as clothing, paper wads, etc., swab the wound carefully with 95 per cent. carbolic acid, then with 95 per cent. alcohol and apply a 50 per cent. alcohol in water dressing. Give an immunizing dose of anti-tetanus serum immediately.

*Erysipelas.* Erysipelas I consider a self-limited disease which will get well in the great majority of cases, providing the general hygiene and elimination are looked after properly and the treatment is not too heroic and drastic. As a local application, I have found saturated solution of boric acid in water with from 15 to 33 $\frac{1}{3}$  per cent. of 95 per cent. alcohol the most comfortable to the patient and the most effective in aiding the production of immunity.

*Streptococcus, staphylococcus albus, staphylococcus citreus, diplococcus of Weichselbaum.* In all strains of streptococcus, staphylococcus albus, staphylococcus citreus and the diplococcus of Weichselbaum, I believe a saturated solution of boric acid in water with from 15 to 33 $\frac{1}{3}$  per cent. of 95 per cent. alcohol more satisfactory than

any other remedy. If the infection is superficial, first painting the reddened area with 95 per cent. carbolic acid until it turns white and then washing it off with 95 per cent. alcohol hastens the recovery.

*Pemphigus vegetans.* In pemphigus vegetans I consider a saturated solution of boric acid in water a specific.

*Staphylococcus aureus.* In staphylococcus aureus I find that boric acid and alcohol are not nearly as effective as in the previous mentioned infections. I find that the staphylococcus aureus is usually the infective agent in carbuncles and furuncles and in these two classes of cases I have used successfully 95 per cent. carbolic injected with a hypodermic needle around the base of the carbuncle, sometimes using as much as two drams in a large carbuncle without producing smoky urine or any other toxic symptoms. This usually relieves the pain very rapidly and results in the carbuncle coming out in a slough and leaving a granulating surface which heals very rapidly. As a local application, in addition to the carbolic acid, I like 50 per cent. alcohol in water or 5 per cent. yellow oxide of mercury ointment as I have found that other wet dressings have a tendency to cause development of a new crop of carbuncles. If the carbuncle has come to a point when the patient first appears for treatment, I usually take a culture and subsequently make a vaccine which comes in handy in the few cases that make a slow recovery. On a few occasions I have excised the whole carbuncle with good results. Dr. Vilray P. Blair of St. Louis in a personal communication told me that he had had splendid results in excising carbuncles with the electric cautery. I can see how this might be a very satisfactory method of treatment.

Furuncles are usually best treated by epilating the central hair, then taking a culture for subsequent vaccine, then treating the furuncle with 95 per cent. carbolic acid, later with alcohol and applying a 5 per cent. yellow oxide of mercury ointment. Incision and wet dressings are likely to result in a new crop of furuncles. Incising and squeezing furuncles situated on the inner aspect of the nose is particularly hazardous because of the direct communication which exists between this area and the superior longitudinal sinus by means of the valveless veins of the nose. I know of a number of cases where an apparently harmless furuncle of the nose ended fatally from



general sepsis. In each of these fatal cases the furuncle was freely incised and no regard was paid to the protecting wall of leucocytes.

*Blastomycosis.* In blastomycosis my personal experience is very limited, but I believe that large doses of potassium iodide given internally and very careful excision, being particularly careful not to infect the freshly made wound, are the most effective remedies so far discovered.

*Actinomycosis.* In actinomycosis removing the focus of infection such as diseased tonsils or teeth, then laying open the sinuses to their very tips and giving the patient sixty grains of potassium iodide three times a day for three days followed by an interval of four days, then repeating, as first advised by my brother, has resulted in cure of every case which I have had under treatment. Incision alone or potassium iodide alone are not nearly so effective and frequently result in failure.

*Rodent ulcer.* Contrary to the opinion of all pathologists, as far as I know, I consider rodent ulcer an infection and not a true carcinoma. Complete excision, being careful not to reinfect raw surfaces of the wound, and covering the defect with skin flap has resulted in cure without recurrence in every case I have treated.

*Impetigo contagiosa.* Five per cent. yellow oxide of mercury ointment or three per cent ammoniated chloride of mercury ointment are very effective in this condition.

*Flachen bacillus of Unna.* Vaccine therapy with sulphur or resorcin ointment and mechanical irritation such as scrubbing with tincture of green soap and curetting once a week with a sharp spoon are very effective in this condition.

*Acute articular rheumatism.* Sixty grains of sodium salicylate in eight ounces of normal salt solution by rectum once or twice a day for three consecutive days, with immobilization of the joints and excluding acids from the food, is, I believe, not only palliative, but curative and would, if employed regularly, reduce to a minimum heart complications. Sodium salicylate given in this way is certainly very much more effective than when given by mouth.

*Malignant edema.* For malignant edema Lord Lister advised "scraping away very thoroughly under chloroform the brown pultaceous slough and freely applying acid permanganate of mercury to the exposed surface, then applying a poultice until

the eschar has separated." Fenger recommended infiltrating the healthy tissue all around the infected area with glacial acetic acid, in this way securing mummification of the diseased area, this to be followed by excision or high amputation. Lawrence Ryan recommends high amputation, with eversion of flap, treating the wound with hydrogen peroxide and injecting the tissues with pure oxygen.

*Noma.* The only two cases of noma I have ever seen I treated in conjunction with Dr. Lawrence Ryan at the county hospital. Both responded promptly to bromine fumes.

*Chronic sepsis.* For neglected cases of chronic sepsis where the wound has or has not healed, but where the patient does not regain his former vigor, I have found hot air baths with profuse sweating and tub baths at 93° F. on alternating days very beneficial.

*Pyocyanous.* For twenty years I have been looking for some remedy to overcome pyocyanous infections and have tried every antiseptic I could think of including formaldehyde fumes and vinegar without finding any remedy of real value. Evidently, I did not use the vinegar in the right strength because Dr. Kenneth Taylor in the Nov. 26, 1916, *J. A. M. A.*, reports excellent results with a one per cent solution of acetic acid in normal salt solution as a wet dressing.

*Influenza bacillus.* Though I have treated a number of cases of pure influenza bacillus infection, I have been unable to find an antiseptic of any particular value and so far as I know none has been discovered.

*Vincent's angina.* In Vincent's angina two to four per cent. silver nitrate, one-half to one per cent. copper sulphate and Loeffler's solution have been recommended.

*Koch-Weeks bacillus infection, Morax-Axenfeld diplobacillus infection.* In Koch-Weeks bacillus infection and Morax-Axenfeld diplobacillus infection, one-half to one per cent. silver nitrate and five to twenty per cent. argyrol have been recommended.

*Surgical tuberculosis.* In surgical tuberculosis I consider prevention of secondary infection the most important item. The other points of importance are properly conducted vaccine therapy, rest, particularly of the affected member, suitable food and fresh air.

*Gonorrhea.* In gonorrhea there is much dif-

erence of opinion and many remedies have been recommended but so far as I know no specific has been discovered. Personally, I have had the best results with vaccines.

*Syphilis.* Calomel in the initial lesion and potassium iodide, mercury and arsenic in subsequent stages.

*Specific inguinal adenitis.* Wide excision of the infected area, leaving the wound open, with dry dressing for four days, then daily tub baths at 93 degrees F., followed by skin grafting as soon as the granulations are firm, has been found the most effective methods of the different methods tried. This method shortens the period of healing very materially.

*Colon bacillus.* I have found vaccine therapy and tub baths at 93 degrees F. the most effective of all remedies tried.

*Indolent ulcer.* In indolent ulcer, particularly in non-syphilitic ulcers of the leg, I have found Unna's paint applied in the form of an Unna's paint boot, as first introduced in this country by Dr. W. S. Royce of Chicago, very satisfactory. In very intractable indolent ulcers, I have recently followed the advice of Dr. Stuart McGuire of Richmond, Va., who in a personal communication told me that his grandfather, his father, Dr. Hunter McGuire, and he himself, and their pupils have for many years used two grains of chloral hydrate to the ounce of water as a wet dressing. I have been delighted with the result and it is surprising how quickly these old ulcers clean up and epidermisize. After they are healed I have found the Unna's paint boot very satisfactory.

*Saprophytic infections.* For the past twelve years I have used daily tub baths at 93° F. with very satisfactory results. Dr. H. M. Richter of Chicago recommends continuous tub baths, many others are using Dakin's solution in these cases with very good results. Others prefer nascent hypochlorite 1/1,000. One thing is noticeable that the solutions which are valuable in septic infections are usually valueless in saprophytic infections and vice versa.

*Mixed infections.* Mixed infections sometimes tax the surgeon's ingenuity to the limit. If the infective agents are a parasite and saprophyte, first treating the wound with the indicated parasiticide and then with the remedy best suited to overcome the saprophytic infection usually accomplishes the desired results. In

mixed infections, where one of the infective agents is the tubercle bacillus, Beck's bismuth paste has proven of real value.

I have presented the foregoing conclusions at this time because I believe that the personal experience of the members of this society, which I hope will be brought out in the discussion of this paper, would be a valuable contribution to surgery; and because there is some danger at this time of having this valuable and useful knowledge—the result of years of clinical experience by hundreds of medical men—put temporarily into the discard by a new fad.

At the beginning of the war some of the lay journals informed us with flaring headlines that Dr. Carrel was going to accomplish wonders by replacing lost ears and noses and faces by new ones, and was going to thereby revolutionize the art of surgery and minimize the horrors of war. However, something must have gone wrong, Either the supply of faces ran out or they did not heal on when sewed on. At any rate, very suddenly this class of copy disappeared from current literature. Something had to be done to fill the space and a new eighth wonder had to be discovered to appease the American public's desire for sensation. A wonderful new solution had to be concocted. As medical men, we should be very careful not to lend ourselves to the popularization of a new fad or to become faddists ourselves. A medical faddist is always a nuisance and may actually be a serious menace to the community which he serves. I am convinced that if Dakin's solution is indiscriminately substituted in the treatment of septic infections for the many valuable remedies above mentioned, much serious harm will be done and many patients will unnecessarily acquire contractures or lose their limbs and even their lives.

2155 Cleveland avenue.

---

#### REPORT OF AN INTERESTING CASE IN ITS RELATION TO SO-CALLED TRAUMATIC HERNIA\*

C. R. G. FORRESTER, CHICAGO

This is a case of an affection which is continually calling for judgment and decision on the part of the physician and surgeon and even more so upon the industrial commissioners of

---

\*Read at meeting of the Baltimore & Ohio Surgeons at Cleveland, Ohio, June 23, 1917.



our state, who have to decide upon the findings whether an employer is responsible. I relate this case with the idea in view that it will probably clear up some points. Also, as one of the greatest problems faced by those who are required to express opinions as the basis for financial settlement for disability, the result of injury, and by the surgeon who must decide from what source he is to derive remuneration for an operation performed upon one claiming injury, traumatic hernia well deserves searching investigation. The economic importance of this subject is, moreover, well recognized and has been repeatedly dealt with in our literature.

On November 7, 1916, a case so closely related to the subject and so unusually cogent to one part of the discussion as to render a report thereon imperative, came under observation. H. S., employed as a teamster, while loading a wagon with lumber, exerted himself to force a timber 4x6x22 inches onto the top of his load. He was holding the end of the plank against his abdomen, and as it did not drop into place he gave an extra hard shove. He experienced a sudden sharp pain in the left inguinal region, of such severity that consciousness was lost for some minutes following. This, according to the man's statement, upon regaining consciousness, was followed by an intense pain in the affected area, accompanied by nausea but no vomiting and a complete inability to ambulate. Some three hours later his pulse was 130, temperature 97, and respiration 32. The scrotum was found distended to the size of a Rugby football, discolored, tense and painful to the touch. The left inguinal canal was distended and painful. The patient was removed to a hospital and operated upon about five hours following his injury. Making the usual incision through the superficial structures for herniotomy, much hemorrhage was discovered at the external opening. The external oblique muscles, its fascia and the internal oblique and transversalis muscles were lacerated and in places showed considerable separation of their fibres. The transversalis fascia was intact. On opening the sheath of the spermatic vessels, rupture of the veins was evidenced. Approximately one quart of clotted blood was evacuated from the scrotum. There was no evidence whatever of hernia formation, no suggestion of a protrusion of the peritoneum or abdominal contents was present, in or about the region of the internal abdominal ring, the structures at this point being intact, not even the slightest evidence of hemorrhage, the condition being found at the external opening only.

Apparently, in this case, all the requisite factors for the production of hernia due to pure trauma were present. There was a rupture of the abdominal wall and a conspicuous increase in intra-abdominal pressure working together for a short space of time. If inguinal hernia can

result from trauma other than piercing of the internal ring structures, why did it not develop in this case? What requisite factor could have been lacking? The explanation of these questions, we believe, is equally decisive in all cases of traumatic hernia, so-called. To understand clearly the agency which was additionally necessary for hernia, it is requisite that some space be given to a discussion of the embryonal and anatomical development of the supporting structures of the peritoneum.

From within, we find first the peritoneum, a membrane derived, no doubt, from the embryonal somatopleur and thus from the somatic mesoblast and epiblast, as a single layer of mesothelial cells and certain mesenchymatous units which later give rise to specialized connective tissue underlying and supporting the epitheloid mesothelial cell layer. External to this serous membrane is an extremely variable layer of fat, a layer which is only with the greatest difficulty demonstrable on the anterior belly wall, being present in macroscopical proportions only under the attachment of the peritoneal reflections forming suspensory ligaments and again under the peritoneum near the bladder.

Omitting this rare pro-peritoneal fatty zone, externally to the peritoneum we find the intra-abdominal fascia, denoted in various locations by different names, but embryologically identical throughout, and anatomically fused to form a continuous container for the peritoneum, a container showing no defect of continuity other than those necessary for the transmission of vessels, etc. This tissue is derived, apparently, from the paraxial mesoblasts, by the same migratory phenomena responsible for the musculature of the abdominal wall, although, owing to lack of early knowledge of the importance of this structure, its derivation has been neglected. All indications of segmentary union have disappeared. Anatomically, using the local names which medical custom has authorized, we may trace this fascia as follows: immediately anterior to the quadratus lumborum muscle there is a moderately strong layer known as the anterior layer of the lumbar aponeurosis which is, at its margin, attached to the transverse processes of the lumbar vertebrae and blends with the iliac fascia covering the psoas muscles. At the outer edge, this fascia is in part continuous with that on the

internal surface of the transversalis muscle, the transversalis fascia, and in part is blended with the aponeurotic sheet formed by the middle and posterior layers of lumbar aponeurosis forming the tendon of the transversalis muscle. Above the tissue extends as a thin layer upon the diaphragm, strengthened by a specialized portion which supplies many fibres to the diaphragmatic fascia, the ligamenta arcuata interna, attached to the body and transverse process of the first lumbar vertebra. The iliac fascia extends also to the diaphragm, being attached below with the anterior layer of the lumbar aponeurosis to the iliac crest, the former internally to the ileo-pectineal line. This lower border extends forward to become fixed to the deep surface of Poupart's ligament, where it coalesces with the transversalis fascia. The latter is attached anteriorly in the linea alba, below to the internal surface of the conjoint tendon, Gimbernat's ligament, and Poupart's ligament, and the iliac crest. Above, it is continuous with the thin sub-diaphragmatic fascia. The pelvic fascia is continuous with the iliac and transversalis and is attached to the ilio-pectineal line. A portion extends inward from the wall to the middle line of the pelvic outlet, at which point the layers from the two sides meet forming a floor supporting and ensheathing the bladder and prostate. This portion, which is pierced by the rectum, and, in the female, by the vagina, is commonly termed the recto-vesical fascia. The fascia covering the lower part of the obturator internus, attached below to the bone along the lower margin of the obturator internus muscle, and behind to the great and small sacro-sciatic ligaments, joins the recto-vesical fascia along a dense line, the linea albuginea, from which the greater part of the levator ani muscle takes origin.

At this point, the origin of the levator ani muscle, inspection will show a delicate tubular prolongation of fascia on the internal surface of the muscle for some distance along the rectum, a similar prolongation being likewise found on the vaginal wall. If care is exercised in dissection, similar projections are found accompanying each and every organ which perforates this envelope. Thus it is that we find the iliac vessels receiving a strong sheath from the transversalis and iliac fasciae. Moreover, at the exit of the spermatic cord or round ligament and the

deep epigastric artery, similar sheath formation is present. Also, the same is true of the obturator vessels and the branches of the internal iliac vessels which pass through the sacro-sciatic notch.

These prolongations of the fascia are found to be funicular in shape and of varying length, generally comparatively short, but occasionally, a point of great importance, they are not terminated for some considerable distance. The latter is generally coexistent with an anomaly of the peritoneum, the existence of a patent, semi-pervious, or occluded sac, as in congenital inguinal hernia.

The second point of prime importance is the tensile strength of these funicular processes, that is, their capability of resistance to the vital stress and strain impressed upon them during life. Individual variations among the several processes of the fascia of one individual are conspicuous, but the variability of the same process in several individuals is even more marked.

If now, according to the dictum of Moschcowitz and others, we accept as fact the hypothesis that the fibrous envelope of intra-abdominal fascia is the real resisting structure of the walls of the abdominal cavity, we will at once be struck by the importance of examining the physical factors of these fascia extensions. In passing, let it be said that the author can with the greatest difficulty only contemplate a belief adverse to the above hypothesis, the more since observing the case above reported in which all support other than the said fascia and the peritoneum and cutaneous structures was obliterated without hernial protrusion, and considers the results of poliomyelitic paresis of this same musculature, where not hernia but slight displacement is the rule. Again, such evidence as is offered on one hand by a case observed by one of my associates in which a well developed man of some 38 years was struck in the umbilical region by the bottom of a large chemical fire-extinguisher driven off at high velocity by explosion, in which case operation showed intrinsic rupture of a great number of the portal vessels, laceration of the spleen, etc., without any defect of the abdominal wall or hernial protrusion; and on the other hand by the experiments of Pember and Nazum in which cats were subjected to crushing trauma with resulting rupture of the viscera without hernial protrusion (a result, however, which must be con-



sidered in relation to hernia other than inguinal owing to the conspicuous difference between the inguinal anatomy of man and all other mammalia), and reported cases in which the stomach, spleen, etc., have been forced into the thoracic cavity through trauma, without failure of the parietal wall; surely these support belief in the resistant nature of this structure.

Let us then take for granted the acceptance of the hypothesis that the retaining and resisting structure of the parietal wall is the intra-abdominal fascia, and scrutinize the relations of these aforementioned funiculate prolongations which accompany egressing structures. We will first note the effect of the element of speed of force applied in such manner as to markedly increase intra-abdominal pressure. It will be clear, if from no other fact than that of experience in blunt dissection, that an increased pressure persistently or intermittently applied over a long period to funicular process of less than ideal strength will produce an increase of the volumetric capacity of such process, as is the case with all tissues endowed with that high degree of physical elasticity needful for supporting structures. A bulging or saculation will thereby result with a deviation from approximately conical outline to one more closely resembling the frustum of a cone, thus producing or rather presenting a new surface at the end distal to the abdominal cavity. This surface will now be subject to stresses applied in such a direction as necessarily to tend to a separation of the attached fibres from the structures accompanied, i. e., a vein, and so an elongation of the entire process. Needless to remark, the nature of the peritoneum is such that it will be intimately associated in such an extension. Thus we may readily conceive the failure of a comparatively weak process with the gradual development of a peritoneal dimple or material hernia. Hence, no doubt, many herniæ are produced and continue to grow by this means, primarily due to congenital weakness or defect of the fascial prolongation, and secondarily to normal or increased intra-abdominal pressure, which assist in gradual development.

The other aspect of the problem, to-wit, the effect of an increased pressure suddenly applied to the parietal resisting structures, is, however, entirely different. Here we will find no gradual extension and distortion of the process and attach-

ment of the structure to its accompanied organ, but rather a stress applied in all directions equally, according to the law of the transmission of pressure by liquids and semi-liquids, with rupture of the weakest spot, followed by the protrusion of the peritoneum, sudden in advent, without any accommodation by gradual displacement, and presumably resulting in similar laceration of this structure—a hypothesis well sustained by the finding of very thin peritoneal covering or peritoneal tears with the rare true traumatic hernia.

It will be concluded then, that in our case such a congenital weakness or defect of a funicular process of the intra-abdominal fascia did not exist, and that, therefore, with the possible exception of diaphragmatic hernia, rupture of the visci themselves would have preceded the production of hernia through any of the normal hernial canals, such rupture having been prevented by the failure of the muscle wall with relaxation of pressure. Especially note the coexistent laceration of the spermatic vein, clearly denoting the magnitude of the stress sustained.

While primarily intended purely as a report of a case bearing most remarkably on one factor in the traumatic hernia discussion, it may be well to conclude this paper with a quotation from the masterly dissertation on this subject by that recognized authority on herniæ—Dr. Alexis Moschcowitz:

Both in Europe and in America, hernia discovered after strains, falls, and injuries, have been accepted as "accidents" and their possessors have been, and are being, compensated accordingly by the employers or by insurance companies, with and without court decisions.

It is time that, in the interest of fairness, and of scientific truth, this should be changed. It is time that medical men, familiar with the anatomy and the pathogenesis of hernia, should cease to certify them as accidents, and should instruct the courts in the relationship between ruptures and antecedent strains, falls and injuries.

## PYELOCYSTITIS IN INFANCY AND CHILDHOOD.\*

HENRY F. HELMHOLZ, M. D.,  
EVANSTON, ILL.

It was not until 1894 that Escherich called attention to the frequency of pyelocystitis in

\*Read before Chicago Medical Society, April 18, 1917.

childhood. The outstanding points in his monograph are: (1) The predominance of the infection in girls, and (2) the frequency of the colon bacillus as the causative organism. These points have since been corroborated by numerous observers. Although the frequency of the pyelocystitis has been repeatedly emphasized in the writings on this subject, the profession at large has not appreciated the frequency nor the seriousness of the condition. This is due largely to two factors:

1. The difficulty of obtaining urine, and
2. The absence of any signs or symptoms, pointing toward trouble in the urinary tract.

If we leave out of account the common cold and gastro-intestinal disturbances, pyelocystitis is one of the commonest acute diseases encountered in girls under two years of age.

*Symptomatology.*—Pyelocystitis is characterized by the absence of local and the presence of general symptoms. The general symptoms are chills, fever, pallor, loss of appetite and a varying degree of prostration. The younger the child, the less likely is it that there will be local symptoms. In infants they are usually absent. When local symptoms do occur, there may be frequency of urination, burning pain, colicky pains in abdomen and pain over the bladder.

The infrequency of local symptoms makes it absolutely essential to examine the urine repeatedly in any febrile condition during infancy and childhood. The statement is usually made that any unexplained febrile condition in a female infant is likely to be pyelocystitis. Even this is not the whole story (1) because of the frequency with which pyelocystitis complicates acute infections and gastro-intestinal disturbances, and (2) because of the frequency with which gastro-intestinal disturbances occur secondarily to pyelocystitis and are considered the sole cause of the fever.

One must distinguish between the primary and secondary forms. In the former the illness begins acutely in a child that has been perfectly well up to the time of the onset. This type is frequently seen in breast-fed infants that have never been sick. The picture is very striking. A well developed breast-fed infant that suddenly becomes ill with high fever, pallor and restlessness and an entire absence of physical findings, is in the majority of instances suffering from a

pyelitis. The secondary form develops during a gastro-intestinal disturbance (summer type) or after infections of the upper respiratory tract (winter type). Local infection of any kind may be complicated by a pyelitis. This makes it very essential to examine the urine repeatedly during the course of any illness, especially when the fever persists. In this form boys are as frequently infected as girls. In order to make a diagnosis of pyelocystitis, one must examine the urine.

Just a few words regarding the urine in pyelocystitis:

1. Methods of obtaining urine. If an infant has diarrheal stools it is almost impossible to obtain an uncontaminated specimen by means of a receptacle such as the Spicer urinal. Usually it is essential to obtain a specimen immediately in acute conditions. If the usual methods fail, the infant should be catheterized. The technique for catheterization is as follows: The orifice of the urethra is carefully cleaned with a 1 per cent. lysol solution and a sterile glass catheter introduced, being careful not to touch anything but the orifice. In a large series of recatheterizations, we have never found that an infection was caused by catheterization. In the catheterization it is well to remember that frequently the pus will all settle to the bottom and the first urine obtained will be perfectly clear, the last portion a thick creamy pus. If only a small amount of urine is taken, the pyelocystitis may be overlooked.

2. The presence of pus cells in the voided urine. If the freshly voided urine is cloudy with bacteria and pus cells, there is no question of the diagnosis in the absence of a vaginitis. The presence of pus cells singly and in groups in a clear voided specimen is not necessarily an indication of a pyelocystitis, and it is essential to obtain a catheterized specimen before making a diagnosis. As a result of temporary plugging of a ureter, the pus may disappear from the urine for 12-24 hours.

3. The persistence of the pus in the urine after the child has recovered from its symptoms has led some physicians to minimize the importance of finding pus in the urine. The tendency to recurrence is one of the greatest difficulties in the successful treatment of the disease.

4. The persistence of the bacteria after the disappearance of the pus makes it essential to



obtain several negative urinary cultures before pronouncing the case cured. The probability is great that many of these cases are not cured in childhood and give rise to the pyelitis of pregnancy.

5. Organism isolated. We have studied 45 cases bacteriologically, nine in boys and 36 in girls. Of the boys eight had a colon infection, and one had a staphylococcus infection. Of the girls, 28 had a colon infection, one colon and streptococcus, two pneumococcus, one *Bacillus lactis aerogenes* and three bacilli of the intermediate group of Gärtner's.

*Course.* The variability of the clinical picture is such that the only manifestation may be a slight fever discovered only by the thermometer, and on the other hand the picture may be so severe as to suggest an acute meningitis. The difference in the severity is probably due to the fact that different portions of the tract are affected. At the present time we have practically no knowledge concerning the frequency with which the kidney or bladder are involved. The cases that come to autopsy usually show involvement of the pelvis and those dying acutely show marked changes of the kidney. In like manner a mild case may suddenly become very toxic, the temperature rising suddenly to 104 without any change in the urinary findings or with a sudden absence of pus due to a plugging of one ureter. The severe complications are usually due to an involvement of the kidney substance. One other point that deserves emphasis is the marked tendency to recurrence. This point, however, needs further work because it is questionable whether or not it is not merely a recrudescence of the old infection. The prognosis in colon infections is usually good. The dangers to life are from involvement of the kidney and in young infants from gastro-intestinal disturbances resulting in a chronic atrophy.

*Therapy.* The most important therapeutic measure is plenty of water to wash out the purulent exudate from the kidney and bladder. In older children there is usually no difficulty in having them take plenty of fluid. In younger children this frequently occurs. Infants may refuse to take anything by mouth and in severe cases what is taken is vomited. Gavage must here be resorted to. If vomiting is persistent fluid must be given per rectum. If this fails fluid must

be given by hypodermoclysis, by intravenous injection or by intraperitoneal injection. At least one quart of fluid should be given every 24 hours to a child under two and at least two quarts in older children. In the drug treatment, we must differentiate between the infant and the older child. The infant usually improves more rapidly on alkaline treatment than by the use of urinary antiseptics. The citrates alone or a mixture of equal parts of citrate and bicarbonate must be given in amounts to render the urine definitely alkaline to litmus, and that as rapidly as possible. It is wise to start in with a child two months or over with a dose of 90 grains in 24 hours and increase this dose by 60 grains each day until the urine is alkaline. The urine must be kept alkaline for a period of at least two weeks.

We have carried on some experiments to determine if possible what the action of the citrate is. Thus far we can only say that it has no antiseptic effect, the bacteria are just as numerous in the alkaline as in the acid urine, although the clinical symptoms have disappeared. Similar experiments were undertaken to see whether the colon bacillus produced more toxin in acid than in alkaline media. These have so far proved negative. It appears, therefore that the action of the citrate is largely a diuretic one.

If urotropin is given in the acute stages, the concentration must be taken into consideration. If the infant is secreting only a small amount of concentrated urine, a small dose may give sufficient concentration of formaldehyde to act antiseptically. If the urine is dilute, it will have no effect.

The dosage of urotropin that we have employed is from 3 to 5 grains 4 or 5 times in 24 hours to children over 6 months of age. The use of Burnham's test at present is too unsatisfactory to recommend its use for quantitative determinations. If plenty of fluid is given the danger of producing hematuria is relatively slight.

In older children one finds very frequently that the citrate is not effective so that after three days of alkaline urine and no change in the clinical manifestations it is advisable to switch to urotropin. If the urine does not become definitely acid, it is well to give sodium acid phosphate to render the urine acid. When neither alkanization nor urotropin proves successful, switching abruptly from one to the other frequently will

prove successful. In long persisting cases autogenous vaccines may be tried, although the results of the author in this regard are not very promising.

## THE IMPORTANCE OF NASAL AFFECTIONS IN GENERAL PRACTICE.\*

NOAH SCHOOLMAN, M. D.

Assistant Surgeon to the Illinois Charitable Eye and Ear Infirmary

CHICAGO.

In every department of human endeavor, we find the intellect first struggling in a mass of chaotic empirical observations, next progressing to a discerning assortment and classification of knowledge, and finally towards a synthesis of the parts into a composite whole. So it is in the practice of medicine. The old time physician was called upon to minister to all the ills that human flesh is heir to. This stage has long been passed. We have made considerable progress along the path of classification. The human anatomy has been divided up into sections and the parts distributed among various specialties. This has resulted in a wide division of incoordinated responsibility and the time cannot be far distant when the sundered fragments will have to be reunited into a synthetic whole and the old time individual physician replaced by an association of specialists in the routine practice of medicine. This time has not yet arrived. At present the special forces are dispersed, and we must be thankful that the general practitioner is yet with us to keep these parts from flying asunder into disjointed space. Medical practice is now conducted through the agency of the general practitioner who summons consultants to his aid as he sees fit and as the spirit moves him. The sick come to him first. He is the first to scan the general situation. The organs in whose welfare the general practitioner is deeply interested stand the first chance of being early investigated and treated. The heart, lungs, abdominal viscera, systems of circulation, innervation, secretion and excretion, are not likely to be overlooked. There are, however, some parts of the human anatomy that have had the misfortune to have been exiled to the region of ultra-specialdom. These organs are constantly

in danger of losing the sympathetic interest of the general practitioner—the first friend in need—and of having to wait and suffer long before any one takes cognizance of their appeal.

I had the honor sometime ago to plead the cause of the larynx before this assembly, and now I embrace this opportunity to speak in the interest of the nose.

The physiology of the nose is interesting on account of the multiplicity of functions the organ is called upon to perform. The nose is the special organ of the sense of smell. In animals and in primitive man, this sense is markedly developed, but under conditions of civilization its acuity has diminished. It may be considered now as the lesser function of the nose, the first importance being given to the role the nose plays in the function of respiration. The nose is not merely a passage way for the respiratory current. It is more than that. The air may be looked upon as gaseous food, and like the solid food it must undergo a process of preparation before it is fitted for assimilation. The solids are prepared in the upper portions of the digestive tract, the air in the upper regions of the respiratory tract—the nose.

During its passage through the nose the air is warmed and moistened by an abundant blood supply which is regulated by the erectile tissue and an admirably adjustable vasomotor system. In addition to that the air is filtered clear of foreign particles and most germs. Their removal is accomplished by the hairy entanglements guarding the vestibule—the vibrissae—by the viscid secretions that clog their progress, by the cilia of the columnar epithelium that waft them outwards, and by the bacteriacidal properties resident in the mucous secretion. Finally, when noxious particles succeed in evading these guards and penetrate the interior of the nose, their temerity excites the nasal righteous indignation expressed by the tremendous sneezing reflex that hurls the invaders back. These are the several lines of defense which still leave in reserve the instant reflex closure of the vocal cords, which are quick to intercept the tracheal and bronchial spasmodic cough, ready to expel offending substances. All this presupposes a keenly alert mucous membrane, unimpaired columnar epithelium, an unaltered mucous secretion and a normal blood and nerve supply.

\*Read before the West Side Branch of the Chicago Medical Society, Feb. 15, 1917.



Abnormal nasal conditions may be considered of two varieties. One variety comprises mechanical obstructions to free nasal breathing as adenoid masses in the postnasal space blocking the posterior nares deflected septum, and hypertrophies of the turbinal bodies. The other variety comprises the acute and chronic infections of the nose. In young children, especially of rachitic diathesis and lymphatic hyperplasias, the obstruction to nasal breathing is usually due to adenoid tissue in the nasopharynx, although nasal diphtheria and foreign bodies must not be overlooked. The mouth is not provided with the complex filtering, warming and moistening apparatus. The dust laden air cools, dries and irritates the mouth and pharynx and causes catarrh of the nose and the lower respiratory tract. The necessity for mouth breathing harasses the child in its attempt at nursing, develops catarrhal states of the digestive tracts, prevents sleep and gives rise to such various reflex neuroses as enuresis nocturna, laryngo spasm and possibly pyloro spasm. Aproxia is another symptom complex described in these children. It consists of an inability to concentrate the attention on one thing, forgetfulness and headache. In this connection some of the comments in the literature are of interest. It is claimed to have been shown that there exists an intimate relationship between the blood and lymph supply of the nose and of the subarachnoid space as well as between the venous channels of the nose and those of the interior of the cranium. This accounts in the opinion of some for aproxia and for choreic and apoplectic manifestations sometimes observed in children with nasal stenosis.

Another important result of nasal obstruction in the young is the malformation of the upper jaw and the alveolar process. The dome-like hard palate is pushed up into the nose and the incisor teeth protrude horizontally outward. Add to this the broadening of the dorsum of the nose, the nasal speech and vacant expression and you have the facies of the adenoid child.

So much for the child. In the adult the obstruction is usually hyperplasia of the turbinates and septum deviations. These subjects are peculiarly prone to develop pulmonary tuberculosis. It is claimed that a large percentage of tubercular persons have defective nasal breathing. That de-

fective nasal breathing is an important predisposing element in the etiology of pulmonary tuberculosis has been impressed upon me by my observations at the Eye and Ear Infirmary. I wish to mention the case of two families who have come under my observation in whom the ravages of the disease has been really appalling. In one family in particular out of eight children, five died between the ages of sixteen and twenty-three of pulmonary tuberculosis. I have been struck by the fact that they all had structural malformation in the nose that interfered with proper breathing. Personally I have been so impressed with this relationship that I have recommended to a large fraternal society operating among the workmen, to insert in their medical examination blanks questions relating to free nasal breathing. Mouth breathers are deprived of the protective agencies afforded by normal nasal respiration. They have the chronic catarrh of the upper respiratory tract, the chronic bronchitis, the illy areated apices on account of the insufficiency of the respiratory current, they are the victims of dyspepsia, CO<sub>2</sub> intoxication due to poor oxygenation, they suffer from the various anemias, neurasthenias and many of the reflex nasal neuroses.

When we turn to the consideration of the acute and chronic infections of the nose, it is well to call special attention to the nasal accessory sinuses. These sinuses play a minor role in the physiology of the nose, but when it comes to pathology they assume protean importance. Barring tertiary syphilitic destruction, atrophic rhinitis, and mechanical nasal obstructions, barring also the infections of selective localizations, like diphtheria, erysipelas, the exanthemata, and the vaso-motor nasal disturbance, like hay fever and allied states, there are few acute and still fewer chronic infections of the nose that need be dignified by any serious clinical consideration, unless they involve the accessory sinuses. An acute rhinitis that stops short of the accessory sinuses is at most a mild discomfort of brief duration with symptoms no more formidable than a heightened irritability of the Schneiderian membrane, a sense of tension, attacks of sneezing and an increase of serous discharge. The more serious manifestations of headache, temperature and purulent discharge are expressions of sinus involvement. Indeed it may be stated without

any reservation, that it is the accessory nasal cavities that give to nasal pathology its distinguishing characteristics.

This will be readily understood when it is recalled that the course of inflammation is mainly a question of drainage. The nasal cavities proper are usually well drained, the accessory cavities usually are not. They are irregular enclosed spaces, partly sub-divided into inaccessible recesses. They communicate with the nose through small openings and tortuous passages which are readily occluded by swelling, and when infection once gains entrance the chance for its rapid subsidence is not always favorable.

The accessory sinuses of the nose are very frequently infected in the course of many general infectious diseases, and in their turn they exercise a deleterious influence upon the general economy. They do so by interference with proper nasal respiration as in polypoid degeneration of the ethmoid or the other sinuses, by extension to contiguous organs, as the larynx and ears, by focal infection and by reflex nasal neurosis and neuralgias.

The incidence of sinus disease in general infections has been studied by Zukerkandel, E. Frankel, Weichselbaum, Wolff, Pearce, Hajek, Skillern, and others. According to these authors the accessory sinuses are involved in many cases of pulmonary tuberculosis and that next to the sputum the tubercle bacilli may be recovered from the accessory sinus secretions. In influenza the sinus involvement is the rule, the influenza bacillus being found in either pure culture, or as is more frequently the case, accompanied by the pneumococcus, staphylococcus, streptococcus and other germs. In facial erysipelas the antrum of Highmore is always involved and in some cases is the primary source of infection. Hajek reports a case which had five recurring attacks of facial erysipelas with antrum involvement. He opened and drained the antrum and there was no further recurrence of attacks for five years. In diphtheria membranous inflammation extends to the sinuses. In all the exanthemata the accessory nasal sinuses are frequently involved. Accessory sinus empyema is not infrequent after typhoid and pneumonia.

It is seen then that besides participating in the inflammation of the nasal cavity proper, the accessory sinuses are frequently involved in the

course of general infectious diseases. It has also been seen that the drainage facilities of these cavities are readily disturbed and as a result the chances for chronic sinus disease must be very numerous indeed.

Chronic sinus disease as a source of focal infection to distant organs cannot be overestimated. J. C. Beck, in estimating the various regions mostly involved in focal infection places the sinuses only next in importance to the tonsils. Billings includes the accessory nasal sinuses among the most common sites for focal infections, and enumerates a most formidable list of acute diseases that may be traced to this origin, such as acute rheumatic fever, rheumatic endocarditis, myocarditis, pericarditis, chorea, nephritis, appendicitis, cholecystitis, osteomyelitis, etc.

Various forms of inveterate headache and intractable neuralgias of trigeminal origin, as supra—and infraorbital neuralgia, are due to some latent infection of the accessory nasal cavities. Examples of this are so numerous that it is superfluous to cite them. Supraorbital neuralgia is frequently associated with acute or chronic disease of the frontal sinus, because the supraorbital nerve supplies filaments to the anterior and lower wall of the frontal sinus. The infraorbital nerve is intimately related to the roof of the supramaxillary sinus. In this position it is less frequently involved in inflammations of this cavity. It is worth mentioning, in this connection, that periodicity is a valuable symptom of accessory sinus involvement. Being dependent on faulty drainage, the symptoms will fluctuate according as posture, time of day, occupation, atmospheric changes and climatic conditions may influence the emptying of the cavities. The frontal sinus drains best in the erect position and therefore secretions tend to accumulate during the night with resulting morning headache. In the maxillary sinus conditions are somewhat reversed. The recumbent position with the head low and turned toward the sound side being better for drainage than the erect posture. Such patients on arising frequently expel masses of purulent secretions from the nose and nasopharynx which accumulated during the night, with consequent relief and subsequent recurring afternoon headache. The sphenoid somewhat partakes of the characteristics of the antrum in



this respect. Drainage from the ethmoid labyrinth is either very simple when the cells open directly into the nose, or very complex when they open into each other, as they frequently do.

The subject of reflex neuroses deserves a few remarks. The nasal reflex arc is made up of branches of the trigeminus as the sensory or afferent end and of the pneumogastric as the motor or efferent end. The most familiar reflex is that of sneezing, normally called forth by irritation of nasal mucous membrane. Frequent and prolonged attacks of sneezing are often caused by irritating secretions or pressure points in the nose. Under conditions of increased sensitiveness, the same reflex mechanism may give rise to a "nasal cough" which may simulate an unproductive cough of tubercular origin. Another group of aggravated nasal reflexes contains spasm of the glottis and bronchi, epileptiform and asthmatic attacks, reflex irritation of the genitalia, cardiac excitation or retardation, and disturbances in the respiratory rhythm. Allied to this group are the vaso-motor neuroses, described as vaso-motor coryza, hydrorrhea of the nose and hay fever. It is worthy of note that pertussis has also been regarded as a nasal reflex neurosis, and it is claimed that it may be considerably mitigated by cocainization of the nasal mucous membrane.

In the etiology of these néuroses recognition must be given to the neurotic and hysterical element, but one must not overlook the important role of accessory sinus suppuration, hyperplasia of the turbinals, polypoid formations, pressure in the region of the middle meatus, and deflections of the septum, which very frequently form the anatomical basis to which the neurotic disposition reacts.

In this connection must also be mentioned the conditions of diminished sensitiveness of the nasal mucous membrane and the reflexes. In such cases foreign particles are inspired into the lungs and may play a part in the etiology of pneumoconiosis and inspiration pneumonia.

25 E. Washington Street.

### ILEUS\*

CARL LANGER, M. D., CHICAGO

Your committee, which assigned the subject of ileus to me tonight, did so, I am sure, not with

the expectation that I would be able to present anything new—for little has been added to the literature on ileus in the past dozen years, but solely with the thought that a reiteration of the salient points in so tremendously important a type of abdominal lesions, could not help but be of aid to all of us. For, other things being equal, our mortality rate in cases of bowel obstruction is in direct ratio to our ability to make an early positive diagnosis.

The statistical statements presented to you tonight are gleaned from a review of the surgical literature of the last eight years. The personal opinions expressed are the result of the experience gained in the performance of 2,000 abdominal sections, which sections were done by me in this institution in the past eight years.

Ileus is commonly divided into three types: Adynamic, dynamic and mechanical.

Adynamic ileus is the type due to atonic paralysis of the muscularis of the gut, and in consequence is characterized by the total absence of peristalsis.

It is the type most commonly found post-operatively—post-operative ileus.

It is the type which often causes us the gravest concern. Nothing but the nicest surgical acumen will save us from the fatal error of reoperating on an already greatly handicapped patient. A sharp, clean-cut, differential diagnosis is absolutely necessary, and the many anxious moments that I have spent in coming to a definite conclusion, a conclusion which meant so much to the patient, are mainly my excuse in taking up your time with an otherwise so trite a subject. The causes producing an adynamic ileus are many.

First of all, let me dwell in some detail on the causative factors which we meet most frequently in our daily work.

#### 1. Localized septic peritonitis.

All of us have seen some of our cases of suppurative appendicitis, supposedly successfully operated on, particularly if associated with rupture, begin to go wrong along the second or third day.

The abdomen begins to distend, the distention increases, yet there's no particular abdominal rigidity or tenderness; the patient begins to vomit. Enemata fail of results, the temperature is but little elevated, the distention continues to increase, the vomiting, however, does not—it may

\*Read at the March 6, 1917, meeting of the Englewood Branch, Chicago Medical Society.

even become less; the pulse rate grows more rapid, the respiratory movements become shallow and embarrassed, the patient grows livid and rapidly passes out—unless luck is with you.

This is not a death due to the localized peritonitis having become general, but a death due to adynamic ileus.

## 2. General septic peritonitis.

General septic peritonitis is so frequently the cause of adynamic ileus, the two so often coexist, that it is extremely difficult to put each in its proper order of causation of the symptoms we are attempting to interpret. One's operative technique is not infrequently, at least in part, a causative factor in the production of adynamic ileus, as the following etiological factors will show.

## 3. Prolonged violent handling of the gut.

## 4. Prolonged exposure of the gut—evisceration.

## 5. Severe traction on the mesentery.

## 6. Prolonged efforts at taxis.

7. In cases of endocarditis an embolism of the superior mesenteric artery may produce an adynamic ileus. The onset is very sudden, the fatal termination occurs early.

8. Thrombosis of mesenteric veins, following a septic thrombophlebitis of the portal, such as we occasionally see follow a hemorrhoid operation or a purulent appendicitis, will also produce an adynamic ileus. The onset here is less sudden than in the former type, but its fatality is no less sure.

The last two conditions are, fortunately, rare.

In 20 years of more or less active surgical work I have met this type of an adynamic ileus but once.

9. Adynamic ileus may also be produced *reflexly*. This is a very important type, and quite difficult of diagnosis.

It is in *pneumonia*, and particularly a day or so after the pneumonic crises, that we see this type most frequently.

I shall never forget a case, which occurred in my earlier years, where a most stubborn obstipation associated with emesis following pneumonia actually reached the operating table, and where nothing saved the patient from an abdominal section but the fact that his bowels moved while the anesthetic was being administered.

Diaphragmatic pleurisy is also occasionally causative of an adynamic ileus.

10. Spinal cord lesions occasionally produce this type of ileus.

I believe I shall be able to bring out the salient points in the diagnosis of an adynamic ileus better by contrasting them with the symptoms of a mechanical ileus; therefore I shall delay the discussion of its diagnosis until we reach the differential diagnosis of these two types.

Before proceeding to the treatment of adynamic ileus, it may be well to say a few words with regard to its prophylaxis, its prevention.

As pointed out in the enumeration of the causes of adynamic ileus, not a little may be done in the ordinary routine of our abdominal technique to lessen the likelihood of its occurrence.

It is well to bear this fact constantly in mind in our intra-abdominal manipulations. The proper dietetic preparation of the patient is also of considerable importance. I think it well worth while to speak here of the systematic administration of Bulgarian lactic acid bacilli during 2 or 3 days preceding the operative interference. While my own experience is limited to a rather small number of cases, my colleague, Dr. Stevens, has employed the method in quite a series of cases and informs me of the distinct benefit the patients receive from it in lessening the annoying meteorism so commonly following an abdominal section.

I am fully aware that the statement I am about to make will seem distinctly heretical to some. I am fully aware, that the praxis is positively condemned by surgical authorities for whose judgment I have the greatest respect, yet I cannot help to advocate the praxis, namely, the routine administration of small doses of morphin during the first 24 hours after an abdominal section. I am in the habit of giving hypodermically 1/8 gr. of morphin combined with 1/60 gr. of strychnin every 4 hours for 4 doses.

I have done so routinely for a good many years, and I have yet to regret it or to see the slightest harm from it.

On the contrary, I am convinced that it quite measurably increases the bodily comfort of the patient—there is none of that restless threshing about, little of those bitter complaints about gas pains and yet in nowise is the distention increased or the necessary peristalsis inhibited.

The strychnin is added with the definite purpose of overcoming any inhibitive effects the mor-



phin might have on peristalsis by its stimulation of the non-striated muscle fibres of the muscularis of the bowel.

*Treatment:* All of you are, of course, thoroughly familiar with the various carminative enemata. The 1-2-3 and S-S are by-words in our institution. To those unaccustomed to our ways, I might add that 1-2-3 means 1 oz. of magnesium sulphate, 2 oz. of glycerin, and 3 oz. of water. S-S is an ordinary soap suds enema.

An oxgall enema: 3 drachms to 1 pint of water or an enema of alum 3 drachms to 1 pint of water are also very popular.

An ordinary molasses enema has often proved efficacious in my hands when all others failed.

Gastric lavage will often stop the most intractable emesis. This therapeutic measure is one of the sheet anchors in the treatment of adynamic ileus.

The French school advocates the use of electric massage, the galvanic current. My own experience with it is rather indifferent.

Eserine, 1/60 gr. every 2 hours, hypodermically, occupies the front rank in the German surgical literature on the subject. Atropin, 1/60 gr. every 2 hours is also frequently advocated.

During the last 2 or 3 years I have placed my greatest reliance on pituitrin, an ampule such as is used in obstetric practice, given hypodermically every 3 or 4 hours.

I believe the use of this therapeutic agent to be a distinct advance in the treatment of adynamic ileus.

*Dynamic Ileus.*—In this type of ileus the obstruction is produced by an excessive peristalsis, a spastic contraction of the gut or rather segment of gut even to the size of a lead pencil.

Dynamic ileus is most frequently met in lead poisoning. In any and all doubtful cases of bowel obstruction one should always bear this possibility in mind.

Tyrotropon poisoning, as occasionally found in milk or ice cream poisoning, is another causative factor.

Dr. Hibbard, a very promising young Englewood physician, whom many of the older members here will well remember, was the victim of such a dynamic ileus.

*Mechanical Ileus.*—While by no means the most frequent type of ileus, mechanical ileus is,

from the viewpoint of the surgeon, the most promising.

In a study of 1,000 cases of acute intestinal obstruction, Gibson found:

35 per cent due to strangulated hernia,  
19 per cent due to intussusception,  
19 per cent due to adhesive bands,  
12 per cent due to volvulus,

the remaining 15 per cent being divided among the other various causes of mechanical ileus. For purposes of description mechanical ileus is conveniently divided into two groups. Group A, in which the ileus is produced by

*Strangulation.*—In this group not only is the lumen of the gut closed, but its nutrition and the nutrition of its mesentery is destroyed, or if the destructive process in the tissues has not gone quite so far, its nerve supply has been so seriously compromised by the compression that a paralysis of the gut, an adynamic ileus, will result even after the mechanical obstruction is relieved.

This not infrequently accounts for a death after an apparently brilliant operative success. Intestinal obstruction is more common in the small than in the large intestine.

The greater mobility of the ileum, its proximity to the various hernial orifices, its relation to the appendix and Meckel's diverticulum, the frequency of adhesive peritonitis among its coils all favor the occurrence of strangulation. The one exception is obstruction by rotation, volvulus, which is more common in the sigmoid than elsewhere.

As stated above, the conditions which most frequently produce mechanical obstruction of the bowel are, strangely enough, conditions situated external to the abdomen proper, namely, the external herniæ.

*Inguinal-Femoral-Umbilical-Ventral.* — The most frequent type is the inguinal hernia. In women, however, femoral hernia is more often the cause of obstruction than inguinal. Femoral hernia is, on the whole, the more dangerous type. It produces not alone obstruction but the more important strangulation much earlier than inguinal hernia; and this on account of the rigid, inelastic walls of the femoral canal, formed by Gimbernat's and Poupart's ligaments.

If a knuckle of bowel becomes incarcerated in

this rigid canal, the pressure of the unyielding ligaments produces an early pressure necrosis.

Operative relief in strangulated femoral hernia must come much earlier than in inguinal or even umbilical hernia if one expects to be able to avoid resection with all its attendant risks. It is also well to remember this likelihood of early pressure necrosis in our manipulation, and in efforts to deliver the incarcerated gut even moderate traction is apt to cause the necrosed or partially necrosed wall to give way and flood the abdominal cavity with its septic contents.

Umbilical hernia is also a frequent source of bowel obstruction, on account of the pockets and diverticula, which it commonly contains. Loops of gut readily slip into these pockets and become strangulated. It is for this reason that "reduction en masse" frequently fails to relieve obstruction in this particular type of hernia. The various types of *internal hernia*, while on the whole rare and still more rarely diagnosed before operation, are yet a fruitful source of bowel obstruction.

Of those occurring in the upper abdomen diaphragmatic hernia is probably the most frequent. It is often traumatic.

The larger part of the small gut will sometimes be found in the pleural cavity.

I have had two such cases under my observation. Improper closing of the opening made into the meso-colon of the transverse colon in a posterior gastro-enterostomy has been, particularly in former years, the cause of a hernia into the lesser peritoneal pouch.

The hernia of Treitz, a hernia into the duodeno jejunal fossa, and a herniation of the gut through the foramen of Winslow into the lesser cavity are among the rarer forms of internal hernia. In the lower half of the abdomen we find herniæ in congenital and acquired peritoneal pockets, particularly about the cæcum and sigmoid the peri-cecal and inter-sigmoid herniæ. Properitoneal hernæ, particularly about the inguinal region are frequently the cause of obstruction.

Volvulus, a twisting of the gut on its long axis, is as I have said, responsible for about 12 per cent of cases of mechanical obstruction. It occurs most commonly in the sigmoid; only about one-third of the cases are found in other parts of the gut.

It is a condition found usually in adult life or later adult life.

In an analysis of 121 cases collected by Gibson the average age proved to be 45 years. Chronic constipation and the resultant overdistention of the gut, with consequent traction and lengthening of the mesentery are considered predisposing causes.

Intussusception, invagination of the bowel, on the other hand, is most frequently found in infancy. Seventy per cent of all cases of intussusception occur in the first year of infancy, and 52 per cent at the ileo-cecal valve; 20 per cent are enteric, small gut into small gut, and about 10 per cent are colic.

It is, however, also seen in adult life, a polypus or rather the dragging of a polypus, is usually the starting point. I have seen a carcinoma of the sigmoid by its sheer weight drag and invaginate the sigmoid until the tumor mass appeared at the anus.

Our knowledge of the causation of intussusception is rather vague, particularly is this true of the cases occurring in infancy.

Here the lesion occurs suddenly, like a lightning flash from a clear sky, and nearly always in well nourished, healthy infants. Atony and distention of one part of gut, with an active peristalsis of another seem to be necessary factors. Constipation also seems to play a role.

*Angulation* of the gut, due to fixation of some point on account of adhesions, or constriction of the gut due to *adhesive bands* produce obstruction of the bowel in about 19 per cent of all cases.

The likelihood of adhesive bands or adhesions producing angulation should always be thought of primarily in a patient who has been the subject of a previous abdominal section and whose external hernial openings have been found negative. Meckel's diverticulum may, and does, act in the same obstructive way as an adhesive band. The same is true of the remnants of the vitello-intestinal duct.

Group B. Cases in which the obstruction is produced by *Obturation*.

The lumen of the gut may be closed by obstructing agents acting from within the lumen or by producing pressure from without. Tumors within the gut:

Cicatrices due to syphilis-tuberculosis, or foreign bodies such as enteroliths, gallstones, fecal



impactions, all belong to the group of causes acting from within the gut. Personally I have but once seen a gallstone produce an obstruction, and only once did I have the opportunity to operate for bowel obstruction produced by an enterolith. Carcinoma and neighboring abdominal tumors are the principal causes of obstruction by pressure from without.

*Diagnosis.*—A fully developed case of mechanical ileus presents no diagnostic difficulty. The cardinal signs of acute abdominal pain, vomiting, distention, absolute obstipation, and extreme prostration and shock are always present; but to positively differentiate an adynamic from a mechanical ileus or to attempt by the symptoms presenting to definitely locate the obstructing lesion requires no little diagnostic skill. Let us take up somewhat in detail the various symptoms and contrast them in the two conditions.

*Pain.*—In mechanical ileus the pain is intermittent and very severe, increasing in intensity as the peristaltic waves attempt to overcome the obstruction; in adynamic ileus there is comparatively little pain, at least pain is not a pronounced feature.

*Abdominal tenderness,* if any, is general in adynamic ileus and entirely dependent on the degree of peritonitis which accompanies it, while in mechanical ileus a marked local abdominal tenderness not infrequently marks the location of the obstruction.

*Vomiting,* while of course present in both types of ileus, in adynamic ileus vomiting decreases both in amount and frequency as time goes on, while in mechanical ileus it increases both in amount and frequency the more time elapses from the beginning of obstruction. It might be well to say a word in regard to the so often mentioned fecal vomiting. I have never seen it. All that is usually fecal about it is the odor.

The vomiting of ileus is one of simple overflow. First the gastric contents are vomited, next a bitter bile-tinged fluid; this is soon followed by the regurgitation of the foul putrefying fluid collected in the gut above the point of obstruction. This is not a reverse peristalsis, but simply an overflow. Johnson maintains that vomiting of feces is only possible if a gastro-colic fistula occurs. Murphy, in the August number of 1914 of his *Clinic*, very aptly says:

"He who waits for the presence of fecal vomit-

ing to make his diagnosis of ileus, will pass the undertaker on the patient's doorstep." He further says:

"Fecal vomiting just misses out on becoming one of the post-mortem signs of intestinal obstruction."

*Peristalsis.*—In adynamic ileus peristalsis is entirely absent, while in mechanical ileus the peristaltic wave is very marked indeed.

*Borborygmus* is the sound produced by small explosions, which occur in the dilated bowel in the effort of the peristaltic wave to overcome the obstruction. It is a very important differential diagnostic sign. The stethoscope is just as important an instrument of diagnostic precision in the differential diagnosis of these abdominal lesions as it is in the diagnosis of chest lesions.

*Temperature* is never present in mechanical ileus, at least in the beginning, while in adynamic ileus it is rarely absent, due to the associated or causative factors.

Certain clinical facts will help materially in our efforts to definitely locate the point of obstruction. If the onset is sudden, if the history fails to disclose an increasing obstipation, which has finally become absolute, we can safely dismiss all obturation obstruction and feel confident that we are dealing with a strangulation. The pain is also much greater in strangulation, more apt to be continuous than in obturation obstruction.

The history of a previous abdominal section will always direct one's attention to a possible obstructive band or to an adhesive angulation. The age of the patient is of some help, when you remember the great frequency of intussusception in early infancy and the late occurrence of volvulus. A careful inspection of all external hernial openings should never be omitted.

The surgical interference necessary to relieve a bowel obstruction varies, of course, with each positive lesion. I shall, therefore, limit my remarks as to the treatment of mechanical ileus to a few pertinent general observations. First of all, every operation for bowel obstruction should be preceded by a thorough gastric lavage. If this is neglected your patient is very apt to drown in his own fluid. A profuse emesis is almost sure to occur while the anesthetic is being administered, and your patient will die of a septic schluck-pneumonia, no matter how brilliant your

operative interference. Then one must always remember that a patient with bowel obstruction is an extremely poor surgical risk. He is usually in great shock, and if the obstruction has gone on for any time at all, extremely toxic.

Henceforth all surgical manipulations should be done with all speed consistent with safety.

Quite often a rapidly made artificial anus will prove a life-saving measure, when the actual relief of the obstruction may then be left to a more favorable time. If, however, an effort to relieve the obstruction is attempted, it is essential to have a definite plan in mind.

Remember that above the point of constriction the bowel is dilated, distended, below collapsed.

Nothing is so detrimental to a successful issue than haphazard fishing around for the point of constriction.

7147 Langley Avenue.

### SOME BODILY EFFECTS OF DEPRESSING EMOTIONS.\*

MEYER SOLOMON, M. D., CHICAGO.

The problems of the emotions and the influence of the mind on the body have been of increasing interest in recent years. This question has been attacked not only by psychologists and psychopathologists, but also by physiologists and even surgeons. In other words, we are coming to realize more and more that disturbing, depressing emotions may play a decided rôle in producing bodily symptoms which we have been in the habit of always assigning to physical causes primarily, such as toxic and infectious processes of one sort or another.

I shall not discuss in this paper the possible effects of ideational processes upon bodily activity, but I may mention in passing that purely ideational processes, such as we see in conditions of self-observation without fear, suggestion and simulation of all kinds, may affect the activity of the voluntary nervous system, but not that of the involuntary nervous system, and even in the case of its action on the functioning of the voluntary nervous system it can produce results only for the brief period during which the ideational process is in activity.

Emotions may be classified for the purposes of

this paper into two main groups: 1, stimulating or synthesizing emotions, such as joy, hope and their allies; and 2, depressing or disintegrating emotions.

The most typical, marked and important of the depressing emotions, which are unpleasant, painful and disintegrating in their effects, are fear, anxiety, apprehension and any of the lesser or more complex manifestations of fear; anger, disgust, grief, hate, shame, bashfulness, sorrow, resentment, jealousy, envy, and the like. Fear, pain, rage and shock of any sort, especially if sudden and intense, are powerfully depressing to the organism.

Let us take fear and shock as the most pronounced in their disturbing action, and consider the range of their possible effects.

We shall not concern ourselves in this paper with the mental manifestations that may be the ultimate outcome of these emotions. It is sufficient to enumerate such mental phenomena as illusions, hallucinations, overscrupulousness, overconscientiousness, and overreligiosity, fears of commission of sins and fears of punishment, such phobias as claustrophobia and agoraphobia, insistent or fixed ideas of one kind or another, aprosexia, states of confusion, states of abulia and uncontrollable impulses, amnesic and paramnesic conditions, disturbances of the sex impulse, states of self-condemnation and self-depreciation with perhaps ideas of suicide, feelings of loss of personality, dual and multiple personality—in brief, we have here all sorts of functional psychopathic states, now being classified under the psychoneuroses and psychoses.

Let us limit ourselves to the bodily effects of these depressing emotions.

In general, we may say that the effects may be transient or prolonged, and may involve the voluntary or involuntary nervous systems, or both.

To a great extent the organic constitution of the individual plays a considerable rôle in the determination of the number and kind of phenomena which we may find. Thus the ductless glands, the integration of the vegetative or involuntary nervous system, and the stability or irritability of the voluntary nervous system are hidden factors not to be forgotten. In addition to this the life experiences of the individual and the development or suppression of the individual instincts or emotional trends, in other words, the

\*Read before the Jackson Park Branch of the Chicago Medical Society, March 15, 1917.



dominant and recessive emotional dispositions, must be given an important place in this connection.

It may be worth while enumerating in running fashion the main manifestations which may result from fear, shock and their cohort. The voluntary muscular system may show trembling, shaking, paresis, paralysis, convulsions, rigidity, contractures, disturbance of standing and walking, choreiform movements. The sensory symptoms may include anesthesia, paresthesia, analgesia, hyperesthesia, kinesthesia and loss of joint sense, and here too we may find affections of the special senses, such as blindness, contraction of the visual fields, deafness, loss of smell and the like. The skin disturbances consist of vasomotor, secretory and trophic phenomena, including horripilation or gooseflesh, pallor, reddening, cyanosis, perspiration, sudden graying of the hair, and according to some, even lasting vasomotor, trophic and secretory phenomena, diffuse or localized. The respiratory system may show apnea, dyspnea, increased rate of breathing, and pseudo-asthma; and the larynx may become paralyzed with resulting aphonia. The disturbance of the cardiovascular apparatus may lead to such symptoms as syncope, precordial distress and pain, palpitation of the heart, tachycardia which may be paroxysmal, bradycardia, cardiac arrhythmia, increased blood pressure, and some believe even edemas and cyanosis.

The genito-urinary system may present alterations in the amount of urine (polyuria frequent), frequency of micturition, emotional glycosuria, suppression of menses, sexual impotence, frigidity or sexual anesthesia, excessive pollutions, and even pseudo or so-called nervous pregnancy.

In the sphere of subjective symptoms we may come upon headache, fatigue and fatigability, dizziness or vertigo, insomnia.

Temporarily dilated pupils and increased tendon reflexes are frequently consequent upon emotional upset.

Even the blood may show changes, as shown by Cannon, with increased adrenalin content and increased coagulability.

Morton Prince<sup>1</sup> has found temporary dilatation of the heart lasting during the period of emotional excitement, even of such pronounced degree as to lead to temporary insufficiency of the

mitral valve and heart murmurs, in persons who were examined as candidates for civil service appointments, but who were apparently in normal health.

Féré,<sup>2</sup> Peterson and Jung,<sup>3</sup> Sidis and Kalmus,<sup>4</sup> Sidis and Nelson,<sup>5</sup> and Wells and Forbes<sup>6</sup> have investigated the so-called psychogalvanic reflex, in which there is a generation within the body, as the result of active psycho-physiological processes, sensory and emotional processes, but not purely ideational processes, of electromotive forces causing galvanic deflection with the galvanometer. This psychogalvanic reflex is probably of two types, one originating in the muscles and the other in the sweat gland activity.

Finally we must not fail to mention the disorders of the gastrointestinal tract incident to emotionalism of a depressing nature. Here we find decreased secretion of glandular activity (dry mouth, inhibited secretion of gastric and intestinal secretions), inhibition of the movements of the stomach and intestines, with loss of appetite, indigestion, nausea and vomiting, and diarrhea.

It is thus seen that depressing emotions may cause disturbed functioning of almost any part of the body, whether supplied by way of the voluntary or involuntary nervous systems.

Although, as a rule, these phenomena are transient and pass off with the disappearance of the depressing emotional state, in other cases, especially if the shock is sudden and pronounced or frequently repeated, but not so intense, more or less prolonged, post-emotional disorders may result, the location of these phenomena depending upon the organic stability of the entire nervous system, with its voluntary and involuntary portions, and on the activity of the ductless glands. It is the weakest, most susceptible, most irritable or most unstable portion of the nervous system which is attacked. Hence it is not surprising that the emotional upset may strike anywhere in the voluntary or involuntary nervous systems.

The bodily effects of the emotions have been studied particularly by Darwin,<sup>7</sup> Pawlow<sup>8</sup> and his followers, particularly Orbelli, Vasiliev, Mishtovt, Babkin, Savadsky, Hornborg, Bickel and Sasaki, Cannon<sup>9</sup> and his co-workers here in America, Crile<sup>10</sup> and such psychologists and psychopathologists as Janet,<sup>11</sup> Dejerine,<sup>12</sup> Boris Sidis,<sup>13</sup> Mor-

ton Prince,<sup>14</sup> Stanley Hall,<sup>15</sup> William McDougall<sup>16</sup> and others.

The chief experimental work in respect to the bodily effects of the emotions has been done by Pawlow and his followers, Cannon and his co-workers and Crile.

Pawlow's experiments and results have been quoted so widely and frequently that I need not dwell on them at any length. He demonstrated that by means of the pneumogastric or vagi nerves which innervate the stomach the central nervous system can act directly on the secretions of the stomach. Pawlow made a gastric fistula in a dog, the esophagus was exposed, opened and sewed to the edges of the skin wound, so that food taken via the mouth did not enter the stomach, but fell out through the opening before reaching the interior of the stomach. At the time of this sham feeding, chewing and swallowing of food relished by the dogs were followed in a few minutes by a flow of natural gastric juice seen in the side pouch of the stomach, this continuing for some time after the cessation of eating. Others have confirmed this in clinical cases in which the esophagus was closed. The chewing of an indifferent substance like gutta-percha is not followed by the outpouring of gastric secretion.

Cannon reviews the evidence in support of the claim that worry, anxiety, and the stronger affective states such as fear, and rage, and also pain, cause a decrease or stoppage of the gastric and intestinal secretions and also an inhibition of the movements of the musculature of the stomach and intestines. The evidence here is definite and positive from the experimental and clinical standpoints.

Cannon has further shown that in pain and great emotion, in other words, in times of great stress for the organism, the blood is flooded with sugar as a result of changes in the liver with the transformation of stored carbohydrate (glycogen) into glucose, the blood supply to the internal abdominal organs is lessened and is distributed in full measure to the heart, lungs, central nervous system and limbs, muscular fatigue ensues, and the blood becomes rapidly more coagulable, and at the same time there is an increased secretion of adrenalin from the adrenal glands into the blood stream. This reaction is reflex and purposive, being necessary for the preparation of the bodily mechanism for flight or fight, the in-

creased blood sugar being useful as a source of muscular energy, the increased adrenalin in the blood acting as an antidote to the effects of fatigue, the vascular changes produced by adrenalin being favorable to supreme muscular exertion, the changes in the respiratory system also being of use for increased effort, and the increased coagulability of the blood being of the greatest utility in case of injury to the body, thus being an adaptive, protective mechanism against possible hemorrhage.

All of these changes of a bodily nature accompanying violent emotional upset are, it is plain, but organic preparations for flight, fight or possible injury. The body seems to be preparing itself for a great emergency—for a fight.

William McDougall's views harmonize with the contentions of Cannon.

And Crile has come to similar conclusions independently, from his clinical, surgical experience, backed up by his experimental work.

Crile's views are in line with those of Stanley Hall, who has studied fear from the phylogenetic viewpoint at great length.

Crile has developed his views in a most interesting and suggestive manner. Laying his groundwork on the principles of adaptation, integration of the nervous system (as worked out by Sherrington), natural selection and phylogenetic association (Darwinian principles), Crile believes that in fear there is a stirring into activity of all the defensive and offensive mechanisms acquired during phylogeny and required for the survival of the organism, which thus prepares itself for flight or fight—for meeting the situation before it in the manner in which it has become used by phylogeny to meet it efficiently.

Here Crile brings in as the real fighting machine his kinetic system, consisting of the brain, the adrenal glands, the liver, the thyroid and the muscles, in the first three of which he finds histologic changes constantly in these states. He compares the manifestations of fear to the phenomena observable in Graves' disease and in athletes at critical points in the performance of their feats, and even believes that exophthalmic goiter may result directly from fear.

As Crile himself puts it: "The brain is the great central battery which drives the body; the thyroid governs the conditions favoring tissue oxidation; the adrenals govern immediate oxida-



tion processes; the liver fabricates and stores glycogen; and the muscles are the great converters of latent energy into heat and motion."

In times of great bodily stress from whatever cause, he contends, it is these organs which are most stimulated into activity and come to the rescue, so to speak, and, in their stimulation of the bodily activities, there is a reversion to older phylogenetically useful types of bodily activity with survival or self-preservation as the goal. No matter what the original inciting cause or causes may be, the end-results are the same. Hence, whether it be fatigue from overwork, hemorrhage, drugs, infections, insomnia, foreign protein injection, Graves' disease or fear, we have the same organs stimulated, an overworking of the kinetic system, and a host of symptoms depending upon this.

Like Crile, Stanley Hall discusses, but from a somewhat broader viewpoint, the reversionary tendency to phylogenetic types of activity which occur so regularly in disintegrating emotions, seen most typically in fear and shock.

In times of great emotionalism, then, we have a breaking through or tapping of some of the reservoirs of power or reserve stores of energy, a statement which would be agreed to by William James,<sup>17</sup> Boris Sidis, William McDougall and Cannon, as well as Crile.

Important in this connection is the rôle of the ductless glands. Cannon lays stress upon the adrenal gland, while Crile considers both the thyroid and adrenal gland.

The vegetative nervous system is given consideration in this connection by Cannon, but not by Crile. I cannot discuss the vegetative nervous system<sup>18</sup> in this paper, but, we must remember that this is the involuntary nervous system, and the disturbed functional activities produced by emotionalism must act through the vegetative nervous system in order to affect any visceral organs or the peripheral secretory, vasomotor and trophic functions.

Adrenalin injected into the body produces the same symptoms that are produced by stimulation of the sympathetic nervous system, and it is believed that in these times of crisis brought about by distressing emotions, it is by virtue of the stimulation and overactivity of the sympathetic nervous system, further stimulated by the increased adrenalin outpouring into the blood

stream, that the various internal vegetative or visceral manifestations are initiated.

Sympathetic irritation or stimulation produces inhibition of those functions which are not essential for the purpose of fighting or meeting the crisis, and thus allows of free activity on the part of those functions which are useful for the organism at these times.

The system thus clears the decks, we may say, for action. There is preparedness for bodily war upon the source of the depressing emotion or shock.

And whether it is a source of emotional upset, a toxin, an infection, a drug or what not, the body tends to revert to the same types of activity to stand up under the attack, with immediate self-preservation as the end directly in view, ontogenetically and phylogenetically speaking.

Instead of speaking of the bodily *effects* of the depressing emotions, it would be more correct to speak of the bodily *accompaniments* or rather *manifestations* of the depressing emotions. Thus William James, in his 'Principles of Psychology, Volume II, p. 448, in giving his theory of the emotions, which he believed applied to the coarser emotions at least, uses the following words: "My theory, on the contrary, is that *the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes IS the emotion.*" (Italics James'.)

#### REFERENCES

1. Morton Prince: Physiological Dilatation and the Mitral Sphincter as Factors in Functional and Organic Disturbances of the Heart, Jour. of Med. Sci., Feb., 1901; and The Occurrence and Mechanism of Physiological Heart Murmurs (Endocardial) in Healthy Individuals, Med. Record, April 20, 1889.
2. Féré: Pathologie des émotions; and Note sur les modifications de la résistance électrique sous l'influence des excitations sensorielles et des émotions, C. R. Soc. de Biologie, 1888, p. 217.
3. Peterson and Jung: Psychophysical Investigations with the Galvanometer and Pneumograph in Normal and Insane Individuals, Brain, Vol. XXX, July, 1907.
4. Boris Sidis and H. T. Kalmus: A Study of Galvanometric Deflections Due to Psycho-Physiological Processes, The Psychological Review, September, 1908, and January, 1909.
5. Boris Sidis and Louis Nelson: The Nature and Causation of the Galvanic Phenomenon, Psychological Review, March, 1910, and Jour. of Abnormal Psychology, June-July, 1910.
6. Wells and Forbes: On Certain Electrical Processes in the Human Body and Their Relation to Emotional Reactions, Arch. of Psychology, March, 1911.
7. Charles Darwin: The Expression of the Emotions in Man and Animals.
8. Pawlow: The Work of the Digestive Glands, English translation.
9. Cannon: Bodily Changes in Pain, Hunger, Fear and Rage; also Results of Recent Studies in Ductless Glands, Jour. A. M. A., Nov. 18, 1916.
10. Crile: The Origin and Nature of the Emotions; also his Man—An Adaptive Mechanism.

11. Pierre Janet: See especially his two works in English, *The Mental State of Hystericals and Major Symptoms of Hysteria*.
12. J. Dejerine: *The Psychoneuroses and Their Treatment by Psychotherapy*, English translation by Jelliffe.
13. Boris Sidis: *The Causation and Treatment of Psychopathic Diseases*.
14. Morton Prince: *The Unconscious*.
15. G. Stanley Hall: *A Synthetic Genetic Study of Fear*, *A. J. of Psychology*, April and July, 1914.
16. William McDougall: *An Introduction to Social Psychology*.
17. William James: *The Energies of Men*.
18. See, for example, Eppinger and Hess: *Vagatonia* (English translation by Kraus and Jelliffe, as No. 20, of *Nervous and Mental Disease Monograph Series*); and Gaskell: *The Involuntary Nervous System*.

## NASAL DYSMENORRHOEA AND THE GENITAL AREAS OF THE NOSE.\*

L. EDWIN BARNES, M. D.,  
CHICAGO.

After months of study and work on the possible reflex arc from the genitalia through some of the disputed tracts of the spinal cord up to the spinal portions of the trigeminus and ramifications through the crura of the pons, the cerebrum and the cerebellum, I came to the conclusion that this one phase of the subject would be a lifetime study in itself, consequently I shall leave out most of the descriptive nervous anatomy, as that may be found in any standard work on that subject.

**Nasal Nerve Supply.**—The nerves of ordinary sensation are the nasal of the ophthalmic, filaments from the anterior dental branch of the superior maxillary, the vidian, the naso-palatine, the anterior palatine, and nasal branches of the sphenopalatine ganglion. Branches of Meckel's ganglion are linked with the facial and sympathetic by the petrosal nerves.

The direct connection of the sympathetic nervous system is demonstrated and illustrated in the larger works on anatomy. I have here a schematic chart from Morris', 1907, *Anatomy*, page 999. It shows the direct connection from the hypogastric plexus to Meckel's ganglion.

The sympathetic is closely associated with the trigeminus nerves and I doubt not that filaments of the sympathetic accompany all of its branches.

**Mucosa.**—The mucosa lining the nose is known as the Schneiderian. It is inseparably united to the periosteum and perichondrium over which it lies. It is highly vascular, especially over the turbinated bones. It continues throughout the

accessory sinuses where it is thin and pale. The upper one-third of the nasal cavity is known as the olfactory region, where the epithelium is non-ciliated and columnar; to this locality are distributed the filaments of the olfactory nerves.

**Blood Supply.**—It is derived largely from the sphenopalatine branch of the internal maxillary artery which enters the nasal cavity by the sphenoidal foramen. Its internal branch, known as the posterior nasal, supplies the meati, the turbinated bodies, the ethmoid cells, the maxillary and frontal sinuses. Its other internal branch, known as the artery of the septum, courses along the septum to the incisor foramen.

The septum is also supplied by the anterior ethmoidal branch of the ophthalmic artery, which enters the nasal cavity with the nasal nerve.

The posterior ethmoidal cells, the roof of the nose and upper part of the septum are also supplied from the posterior branch of the ophthalmic artery.

**Veins.**—They form a deep plexus in the mucous membrane, the deeper ones being especially large and frequently appear like cavernous tissue. *This is found developed most largely in the whole of the lower turbinated structure and in the posterior border of the middle turbinated bone.*

These deeper arteries and veins often lie in juxtaposition to one another, whether in bony canals, as the sphenopalatine foramen and the ethmoid cells, or close to the bone and cartilage, as on the septum and along the turbinated bones, so that *the vasomotor dilatation of the artery opening the afferent blood channel at the same time compresses and narrows the venous efferent vessels, thus mechanically contributing to the passive congestion of the capillary and cavernous blood spaces of the erectile tissues.* The arterioles have, proportionately to their size, more of the muscular layer than they have in the regions of the body unsupplied by erectile tissue. From their deep situation they tend to pursue a corkscrew course toward the surface and the venous sinuses. These arterioles in the deeper layers are spaces in adult life, much enlarged in a mucosa when it is the site of inflammatory change. \*The more superficial net work consists of vessels not so large as the deeper channels of the erectile tissue.

Vasomotor dilatation means not only an exudation of the serum of the blood vessels into the

\*Read before the Englewood Branch of Chicago Medical Society, April 3, 1917.



stroma and a consequent swelling of it, but simultaneously is a direct discharge into the glands on the surface of the mucosa. Around the ducts of the glands, whose mouths usually lie in some sulcus of the surface epithelium, there is at these openings a more or less thick net work of capillaries. In many places this is very well marked, as Zukerkandl pointed out. A vasomotor dilatation of these capillaries would mean a considerable constriction of the gland outlets. This would cause the dilatation of the acini. As the vasomotor excitement subsides, the superficial capillaries cease to cause this compression and the mucous contents are liberated.

*Vasomotor System.*—The blood vessels supplying a nerve terminate in a minute capillary plexus, the vessels composing which pierce the perineurium and run for the most part parallel with the fibers; they are connected by short transverse vessels, forming narrow oblong meshes, similar to the capillary system of a muscle. Fine amyelinic axones accompany these capillary vessels, viz., the VASOMOTOR FIBERS, and break up into elementary fibrils, which form a network around the vessel.

Horsley has demonstrated certain myelinic fibers running in the epineurium and terminating in small bulboid tactile corpuscles or end bulbs of Krause. These nerve fibers, believed to be sensory and termed nervi-nervorum, are considered to have an important bearing upon certain neuralgic pains.

*Lymphatics* are abundant and large, and communicate with the lymphatic spaces around the branches of the olfactory nerve; these spaces again communicate with the sub-dural and sub-arachnoid spaces in the cranium (hence may carry infection from nose to meninges).

Before reading or relating to my cases I shall briefly state what others have done in this field.

*Mackenzie's Reflected Nasal Phenomenon.*—In 1883 Dr. John N. Mackenzie reported his researches on this phenomenon. He found a well defined sensitive area, whose stimulation, either through a local pathological process, or through the action of an irritant without, is capable of producing an excitation which finds its expressions in a reflex act or in a series of reflected phenomena. This sensitive area corresponds with that portion of the nasal membrane which covers the turbinated corpora cavernosa. All parts of this area are not equally susceptible to irritation, the most sensitive spots being probably represented by those of the membrane which covers the inferior half of the lower tur-

binated bone, and the erectile body on the septum immediately opposite.

*Genital Spots of Fliess.*—In 1887, Dr. Fliess, of Berlin, reported a series of cases in which he found that these genital spots swell during the menstrual period, bleed easily, and are somewhat cyanotic, they are sensitive to the touch of a probe. During labor a swelling of the erectile tissue of the nose was noted at each uterine contraction.

His first experiments were with cocaine. During an attack of dysmenorrhea, applications of a cocaine solution were applied to the genital spots; the pains in the back and abdomen ceased after from five to eight minutes, and did not return until the effect of the cocaine wore off. *If only the turbinates were touched the headache ceased, but not the abdominal pains. If only one side was treated the pain on the opposite side of the abdomen was relieved.* He then sought for permanent effects, using bipolar electricity, the galvanocautery and trichloroacetic acid on the genital spots with a large percentage of success, as most of the cases had no more menstrual pains.

*Nasal Reflex in Obstetrics.*—In 1908, Dr. Koblanck observed the connection between the nose and the genital organs. In obstetrical work he finds that two different effects can be secured by different technic. If the parts be pencilled with cocaine, pain will be relieved, most promptly and effectually if the application is made about the middle of the first stage of labor, and if the pains are due to muscular contractions and not to pressure. *If the tubercle be rubbed firmly with a smooth glass rod, the uterine contractions will be stimulated.* The gynecological applications are more numerous. Dysmenorrhea can be relieved by the cautery of this region in the nose. Some cases of amenorrhea which, in his opinion, depend on onanism, are cured by reducing the swelling in the nose by which the abnormal tendency is reduced and the vicious habit given up. In a similar way he has reduced abnormal sexual irritability in men. Sterility may also sometimes be removed.

In 1914, Dr. Emil Mayer reported a series of ninety-three cases and has treated almost as many more since then (this is the largest group of these cases that I have found recorded in America). In replying to his critics, he states, that many disputed the results he claimed to achieve, viz; about sixty to seventy per cent. of symptomatic cures. The reason of the poor results is due to a misconception as to the actual site of these genital spots and of the tuberculum septi.

*Genital Areas of the Nose Described.*—None of the descriptions of these spots (so-called) that I have read are as precise as they should be. There seems to be a sense of mystery surrounding them and their locality, therefore I shall endeavor to give a simpler description of these AREAS (not spots). The erectile tissue of the nose, like that of the sexual organs, like the cock's comb, rapidly grows in volume at the advent of adolescence: the

venous sinuses of the nasal erectile tissue become larger, due evidently to physiological, vasomotor excitement.

The more superficial network of blood vessels is not so large as the deeper channels of the erectile tissue, and vary in different individuals. *Its development has a close relation with the beginning of sexual life, since it is only seen in its full extent after adolescence is well established, and atrophies in old age.*

It is found along the lower border of the middle turbinate as its anterior extremity. It is frequently fairly well developed on the posterior border of the septum, forming some of the tissue going to make up the tubercle of the septum, seen at the upper part posteriorly on each side of the vomer, opposite the lower or posterior end of the middle turbinate, and the inner or posterior part of each inferior turbinate. They are not easily demonstrable on the cadaver because the mucous membranes shrink and the blood vessels relax.

*Instruments Used.*—I use the Stearn or the Hagler hard rubber speculi. They are similar to an ear speculum. I would advise you to try a large size ear speculum in the nose and see if you do not get a better view. The other instrument used is a regular applicator wound with cotton and moistened with cocaine and dipped in a few crystals of trichloroacetic acid. I use the acid because it has a limited caustic action, not destroying tissue to the depth that phenol or other escharotics do. If it is necessary to do more radical cauterization, then use electricity.

I assume that the nose is not in any way obstructed. If there are obstructions, they must be treated first.

*Special stress* is laid on the importance of treating these areas only. All of the workers reporting this condition have emphasized this precaution, because the mucosa elsewhere in the nose is much thinner and more subject to cicatricial changes.

These areas themselves bleed very easily at the menstrual periods. This is one of the overlooked causes for recurrent nose-bleed or epistaxis, especially in adolescence.

#### REPORTS OF THE AUTHORS' CASES

*Case 1.*—February 3, 1913, Mrs. M., age twenty-eight years. History: Severe headaches, nose stopped up for three or four days. Had these at intervals of three to six weeks; menstrual history not asked at

the first visit. Findings; turbinates congested, left middle one pressing septum, septum slightly deflected to left, mucosa hypersensitive. Treatment; cocaine 4% and adrenalin. Rx. Ung. Adrenalin et cocaine, t. i. d. February 19, 1913; returned feeling better than she had since a girl. On further inquiry additional history is: headaches and cramps every three to five weeks since fifteen years of age, occasionally severe enough to confine her to bed for two or three days. Treated in a large eastern city for "uterine cramps," although as she stated, the doctor could not find any abnormality and he treated her for her nerves. February, 28, 1913. Some pelvic pains; same treatment, with prompt relief, menstruated three days, no pains. Advised acid cauterization of the genital areas. March 5, 1913. Applied 4% cocaine, then trichloroacetic acid crystals; some tenderness, not very painful. I saw the patient every two days, on the sixth day the slough had cleared and the surface looked clean, so I repeated the treatment on the 11th, the 17th, and the 24th. Three days later menses appeared painlessly. Shortly after this she left the city and was not seen until June, 1916; over three years and still has painless menses.

Note—On the patient's first return and on hearing her additional history, the author was dubious as to the connection of the nasal treatment to the complaining organs. He supposed she had a cocaine euphoria. This doubt was not dispelled even on the second treatment until he looked up the reflex reported by Mackenzie and latter by Fliess and others.

*Case 2.* Miss T., aged twenty-one years, office clerk. History: Nausea, severe premenstrual headaches for one day, almost makes her crazy, had to take large doses of paregoric to get a little relief. Doctor said her womb and passages were normal. Findings: Nose normal except for the cyanotic appearance of the genital areas. Patient looks haggard and pale. Treatment: cocaine and adrenalin tampons in nares. In ten minutes relieved and looked like another woman. September 15, 1913, trichloroacetic acid applied and repeated. September 20 and 26. October 2, menstruated with some pain, promptly relieved with cocaine. Cauterized with trichloroacetic acid on October 6, 11, 16 and 22. October 24, menses painless. Eight applications. July, 1916, no pains to date, almost three years.

*Case 3.* Miss H., aged twenty-three years. Dressmaker. History: Bearing down pains in pelvis, backaches, headaches (occipital and frontal), fidgety (nervous). Had womb stretched by woman doctor, no relief. Findings: enchondrosis of septum right side. Inferior turbinates swollen. Treatment: April 4, 1914, cocaine and adrenalin to genital areas. April 10, spur removed under local anesthesia; healed in two weeks. Menses May 1, some discomfort, local cocaine and adrenalin treatment with prompt relief. May 7, trichloroacetic acid applied; quite sensitive. May 14 and 21, not so sensitive as first application. Menses present May 26; painless. July 20, patient returned after two painless menstruations, stating that



some sharp pains were present. Local treatment of cocaine and adrenalin, trichloracetic acid applied and repeated July 25, 30 and August 5 and 10. Menstruated August 16, painless. Patient not heard from in over nine months; next patient reports that "Miss H. never felt better in her life."

*Case 4.* Mrs. J., aged twenty-seven years. Canker. History: Always had colic and general weakness a day or two before menses appeared. Had a miscarriage one year ago; was curetted and pronounced well, and everything "O.K." locally, as far as the doctor could determine. Findings; turbinates swollen and mucosa generally inflamed. Treatment: cocaine and adrenalin, did not entirely relieve patient. Returned in the evening, 25% cocaine applied, some relief, but not as in previous cases. Moistened cocaine crystals did not give entire relief. Patient requested cauterization, or as she called it, the acid treatment, thinking that it might do what it had done for others she had heard of. Trichloracetic acid applied April 7, 1915; very painful. Requested another trial, which was applied on the 14th. This was also painful, she blew her nose, which started a hemorrhage on the right side. This lasted two hours before it was stopped by packing the naris with gauze moistened with permanganate of potash, grs. v to water oz. 1. Patient decided that was enough. She sent me patient No. 9, so I feel that she was not angry, as I thought she might have been. She is partially relieved by cocaine and adrenalin unguentum.

*Cases 5, 6, 7, 8.* June 8 to August 11, 1915. Histories similar. Ages eighteen to twenty-five years. Office clerks, stenographers and bookkeepers. Severe pains, (uterine colic) headaches, backaches, faces pale and distracted, one almost hysterical. Note—It is only when the pain is severe that the female seeks for relief, a moderate pain is borne as a matter of course.) Findings; noses quite normal except for the turgescence present, especially around the genital areas. Treatment: Cocaine and adrenalin. After menstruation ceased the trichloracetic acid applications at five-day intervals. Results uniform, viz; painless menstruation at the following one or two periods, after which they were not heard from until I wrote them in July, 1916. Three replied that they were well, an aunt stated that Case 8 was in New Jersey and never complained since the treatment.

*Case 9.* Miss N., aged twenty-eight years. Dress-maker, referred by Case 4. History: Menses every three weeks, painful and scanty, flows freely one day. Treated by ten or twelve doctors since she was a girl of fifteen. Findings; large spur or exostosis of septum on lower right side. Turbinates swollen. Treatment: Cocaine and adrenalin twice daily for two days, gave great relief. September 8, removed spur under local anesthesia. Menstruated, September 23, 1915. Usual premenstrual distress, relieved by cocaine and adrenalin. Trichloracetic acid applied September 25, 30 and October 6, menses almost painless October 13. Three more treatments on October 16, 20 and 25. Menses present November 6, and painless. February 7, 1916, returned with some pelvic dis-

tress and headaches. No pain for three months and menses every four weeks. Treatment repeated every five days for four applications, February 10, 15, 21 and 26. Menses March 5, painless. Patient has been free from these pains up to the last inquiry, February 1, 1917, or one year.

*Case 10.* Mrs. J. S., aged thirty-two years. History: Pains all her life since menses appeared at age 14, exhausted for a week after menstruation. Usually in bed for two to five days. Had one child; it died at age of four years. Three miscarriages, one about 7th month, one at 4th month, last one a year ago about 2nd month of pregnancy. Curetted twice, leucorrhea five years ago, treated three months; none since then. No relief by drugs or douches. Sedatives help only while their action lasts. Findings: Small nose, almost closed by congested conditions. Cocaine and adrenalin reduced swellings, showing hypertrophy of middle turbinates, greater on left side. Treatment: Cocaine and adrenalin twice daily for three days until menses were well established, relief pronounced but not entirely relieved. July 10, 1916. Partial left middle turbinectomy. July 31 menstruated with usual symptoms, promptly relieved by cocaine and adrenalin; not confined to bed as usual, some discomfort at night, not anything like they were.

August 5, 11, 16 and 23, trichloracetic acid applied. Menstruated August 27, almost painlessly; only slight uneasiness first day. Menses lasted four days. First time she has not had to give up housework in years.

Tried to locate patient October 1. Letter returned, "not known here."

*The results* of this series are; seven symptomatically cured (may be eight) as far as I could ascertain by writing them. Case 4 was little benefited. Case 10 doubtful as to results. Case 8 I took aunt's word for her niece's condition. **SELECTED CASES ONLY** seem to be benefited, viz., those who are readily relieved by cocaine applications. Those who do not respond to it as in cases 3, 4, 9 and 10 are not so certain of apparently permanent relief as those who do.

#### A PLEA TO THE GENERAL PRACTITIONER

I suppose that the gynecologist, as a systematic routine, examines the genitalia for uterine versions and flexions, but the general practitioner often overlooks the careful examination of the clitoris. This is often the basis for a lot of trouble. In my earlier career at the old Illinois Clinic, I have seen and examined hundreds of females and found many long hoods or prepuces that harbored decomposed secretions and caused chronic inflammation of this sensitive organ. Often the prepuce becomes adherent and a circumcision is necessary. Any amount of medication or douches would not relieve this condition unless special attention were directed to it.

## CONCLUSIONS.

That a demonstrable symptomatic reflex exists between the nose and genitalia is evident. That many of these cases of real torture, as portrayed by their countenances, are promptly relieved, often with a rapidity that is surprising. The relief obtained certainly does make the patients grateful.

Others have relieved labor pains (muscular), corrected amenorrhea, removed the desire for onanism, affected a few cases of sterility, and reduced sexual irritability in men.

Some of my fellow practitioners have failed to obtain as high a percentage of symptomatic cures which I attribute to two things; one is that they expected all cases of disturbed menstruation to be immediately relieved. Second, they have the idea of spots instead of areas. These areas are more extensive in one patient than in another, but reasonably constant in locality as seen through the nasopharyngoscope.

If the reading of this paper will be the means of enabling any of you to relieve one of these nerve-racked women of dysmenorrhoea, I shall be well repaid.

I thank you for your attention.

## DISCUSSION.

Dr. George Schmauch stated that he was personally acquainted with the work of Drs. Fliess and Koblanck, and had seen many of the cases as reported, but he doubted the permanency of the cures. It may be that there, as here, in the earlier stages of enthusiasm in the 80's and 90's, the first doctors thought they had a general cure for these female and male pelvic pains; whereas this treatment applies only to a selected class.

Dr. Mark T. Goldstein was pleased to know of this work being done by someone, because the specialists that he referred patients to for this condition treated it lightly. He related a case of a doctor's niece who had been examined and treated by several doctors here and in the East, for her pains and not relieved. He advised his doctor friend to treat her nose or have it treated. The young lady (a virgin) had her nose cauterized and was cured of her pelvic distress and has remained so for many years.

Dr. E. L. Cornell asked as to hemorrhages.

Dr. Barnes: These areas often bleed easily, they may start to do so even from a slight friction with plain cotton. The nose bleed of young men and girls at the stage of adolescence is frequently due to the sexual irritability present.

Dr. W. H. Holmes requested the physiology of the phenomenon. This is still in the experimental stage. All I can say is that I believe it to be through the

sympathetic system. The conditions observed (as previously stated in this paper) by Drs. Fliess and Koblanck, can be produced on most of these patients.

Dr. E. McGinnis stated that he operated on the nose of a male and that he was called to see the patient because of an hemorrhage. On arrival the patient stated that he had had an erection and then the hemorrhage started. This paper tonight sheds some light on the connection and cause for the bleeding. He also cited a case of a young lady that liked to have her nose treated because it caused sexual excitement. This again demonstrates, that by irritating these areas the genitals are affected.

## BIBLIOGRAPHY

- 1883, John N. Mackenzie: Trans. Am. Laryngol. Assn., p. 81.  
 1895, Jonathan Wright: Dis. of Nose, Am. Jour. Med. Soc., May 1.  
 1897, W. Fliess: Relation Nose and Female Genitalia.  
 1908, Koblanck: Deutsche. Med. Woch., June 11.  
 1909, A. S. Hobbs: Priapism and Nasal Disturbance.  
 1909, Lenox Brown: Epistaxis at Puberty, Packards Dis. N. and T.  
 1914, Emil Mayer: J. A. M. A., LXII, 6.  
 Gray's, Morris' and Piersol's Anatomy.

## POINTS AND POINTERS.

G. W. NESBITT, M. D.,  
 SYCAMORE, ILL.

*Mr. President and Doctors:* Having been asked to prepare a paper on the subject, "Points and Pointers," my interpretation of it was this: "Points" are things I have observed from association with others and "Pointers" what I may see fit to suggest to others.

Twenty-five years ago this week I started in the practice of what I then considered the noble, self-sacrificing, elevating and grand profession of medicine, and after the twenty-five years of close attention to the work, in all its phases, I look around to see what points there may be that have left their indelible imprints on my years of practice. I am thinking first of all the diseases, accidents and operations that I have been more or less intimately associated with; but no, it isn't what I have found or what a fellow member of the profession has told me was good to do, or not to do for pneumonia, typhoid fever, appendicitis, gallstones, fractured hip, scarlet fever, smallpox, or measles that appear as points to remember, but what has been most prominent and always present, has been the impression of the men themselves in the practice.

Then, when I have decided that it is my fellow

\*Read at the meeting of the De Kalb County Medical Society, April 27, 1917.



practitioners that are uppermost in the consideration of points, I begin to wonder in this way: Is it a peculiarly constituted individual that selects the medical profession for his life vocation, or is it the study of medicine in its various phases; its study of physiology, anatomy, materia medica, pathology, chemistry, dissection, obstetrics, surgery, its free clinics and hospitals, that tends to develop in an individual the unusual temperament which we universally find in the men of the medical profession, you all being thoroughly acquainted with him?

In this paper I prefer to make a few homely illustrations rather than to analyze the profession and you will have no difficulty in making your own analysis and saving me a whole lot of time.

1. Have you ever heard a fellow-member of the profession enter into any lengthy complimentary conversation with reference to any other member of the profession living within thirty miles of him, except, of course, at his funeral? No, they don't do that. You all know too well what we do.

2. Have you ever known a fellow-physician to go out of his way to keep another out of trouble, such trouble, of course, pertaining to the practice and possibly malpractice? I think not. At least, not any oftener than to make the exception that proves the rule.

3. Have you numerous recollections of a fellow-physician being called after the discharge of another, and after hearing the diagnosis of Number One, agreeing with him in every detail? Of course, taking for granted Number One had been right and entitled to the consideration. No, we don't look hard for a chance to present our fellow members with bouquets, except of onions, garlic or ragweed; and why is it? Is it our association with sick people, grunting chronics, crying babies and the injured that makes us so ornery, mean, narrow and selfish and all of it heaped upon our fellow members? I can hardly fool myself to say "Brother members" yet, although it would be a pleasure.

But whatever it is, it is slowly bringing about a self-destruction, and we are that short-sighted that we will not see slipping, in the public opinion, of the doctor's standing, compared with fifty or even five hundred years ago.

The public have heard us belittle the knowl-

edge and ability of each other so often that they have lost a good share of their confidence in us, and can you blame them?

Now, until about twenty-five years ago this mutual condemnation kept only the sick, particularly the chronic sick, going around us in a circle, from one to another physician; but about twenty-five years ago a few of these chronics in some way occasionally broke through the circle and slid out on to a side track, which side track has gradually lengthened and broadened until now it is nearly as great a system as the old "I Knock Your Railroad." I refer to the great aggregation of osteopaths and chiropractics, who have become so numerous, strong and well thought of by the public that it is requiring all the power and strength embodied in the workers for the medical profession to prevent their being recognized by the state boards on an equal standard with the medical profession, and it will be but a few years when they will have the legal right to practice any and all branches of medicine, and they are building up their business wholly from our old, staid patients and their bank accounts from our monthly earnings, and we have only one eye open as yet, to the situation and its possibilities, and unless we get the other one open pretty soon, we will have coming to us one of the most powerful jolts we have had in years, and that jolt will impart such a combination of permanent injuries that we will be forever partially disabled.

These men are curing your and my chronics. Not all of them, of course, but a sufficient number of them to be making themselves recognized and credited with knowledge and ability equal to the average physician. And why not? Every one of us knows they have cured one or more of our chronic cases which we have treated for years, and like any physician, if they have only a few cures, particularly of chronic cases, that have been the rounds of all the doctors in reach, they establish a reputation that will build up a practice; as you all know, it's the cure of the chronic that makes the community talk and boost the doctor, not your acute, self limited diseases, as they are hardly sick long enough to solicit the interest of the public or even immediate friends.

There are today 32,000 osteopaths and 15,000 chiropractics practicing their profession in the United States and they are educated men, with a

better knowledge of anatomy than the average physician, simply because the greater part of their study is anatomy and their treatments are based wholly upon anatomical study and manipulations.

I will let this conclude the first part of my subject, "Points," hoping, short as it is, that it may give you a nucleus for thoughts on the subject and thereby develop something far better than my few, crude efforts could.

Now, in order to fulfill my agreement, I have yet the questions of "Pointers" to consider, and I realize that here is where I must be careful, as for these I am fully responsible—the pages before were a recitation of existing facts.

I have no pointers to give you in surgery, materia medica, physical diagnosis, obstetrics, or gynecology. You probably, most of you, know as much, if not more, about these subjects than I do. Most of you have not given much thought to the question of the osteopaths and chiropractics and why they get their business and hold it; why they are on the increase every year; and as many succeed in making a living as the output of the medical colleges that are on the decrease. Now, why are they on the increase? It must be because they are a necessity; because there must be a demand for their methods of treatment.

How many of you have studied their theories and practices? If any of you have, you have found that their whole work and success depends upon something they do in their system of treatments to relieve one, or many, pinched nerve fibers. But, for me to start on the subject of nerves would be ridiculous, as it is a subject that fills volumes, fill libraries. But I may mention subluxation, excepting, of course, that some of you will sing the same old threadbare song of bunk, four flush, fake, tommy-rot and so forth, so for protection, I shall have to quote from Keating's Medical Dictionary. "Subluxation, a partial dislocation," meaning, of course, that there can such a condition.

But, as I have told you before, we have ignored the question of subluxation as applied to the spine, and it is too great a subject to be embodied in these few pages, so I will simply give you reference to Arthur L. M. Foster M. D.'s work on "Special Adjustments" and those of you who think it worth while may purchase the work, or one of the many others published by members of

our own profession, and I shall make my arguments on subluxation from cases you are all familiar with—the subluxation of the arch or dome of the foot commonly called, "broken down arch."

None of you are satisfied in giving a bottle of liniment and some anti-rheumatic remedy to the patient that comes into your office complaining of lameness in one or both legs. No, of course not. You insist on his removing his clothing, shoes and stockings, and examining him for a cause and very frequently find it a subluxation of the arch of the foot, and when you do find this as the cause of his lameness, you treat and support the arch mechanically proper, and your patient is cured.

Now, it isn't because your patient's bony arch is flattening out that he suffers so much pain, walks as if his back were broken, and is unable to sleep all night after a hard day on his feet, but because the subluxation produces a pressure upon the internal and external plantar nerves, these nerves being the entire nerve supply to the powerful system of short muscles supporting the double bony arch, made up of short, solid bones and bound by strong ligaments; and any injury to these nerves will incapacitate the great mechanical foundation proportionately to the extent of the injury.

Now, when the arch starts to become subluxated, its bony prominences commence making pressure upon the nerve supply to the muscles and ligaments that make the arch, thereby injuring it and detracting from its function or work, therefore resulting in further increase in the subluxation as the muscles and ligaments receive impaired messages through their nerve supply and each increase causing additional damage, and more injury and more injury, with additional subluxation, until the arch is completely ruined and the whole important subject of curing broken down arches comes back to the relieving of a pressure or injury of the nerve supply.

Now, this theory will apply all the way through the anatomical study of nerves and bony impingement of nerves, and far more common subluxations are those of the spinal column; and as a consequence of these subluxations there is produced an impingement upon the nerves which pass through the inner vertebral foramina, corresponding to the vertebrae involved in the dis-



placement. This impingement is a direct result of the pressure produced by the altered position of the margins of the intervertebral foramina, and these foramina, normally, are only of sufficient size to contain the vessels and nerves which they transmit, and a decrease in size of any of these foramina results in a diminution of the space required by the nerves for the exercise of their normal function, thereby preventing the proper conveyance of impulses to the parts they control. And from our study of physiology, we learn that pressure gradually applied to a nerve first increases and later reduces its power to respond to irritants; and if the power of a nerve to respond to irritants is lost, it assuredly is unable to carry impulses.

Now, this is as deep as I see fit to go into the subject of nerves, sympathetic and spinal, as it is enough to show to any who care to be shown, what the possibilities are from subluxations, and, if interested at all, you will take up the study of the subject and get results you never have had before in the treatment of your chronic cases, when you are reasonably sure they have no destructive organic lesion. And I will content myself with reciting a few of my cases, with results obtained along the lines of reducing subluxation. My attention was first called to subluxation in the fall of 1908.

*Case 1.* J. A. W. was driving home at 10 o'clock at night when a large dog ran up behind his buggy letting out a loud, sharp bark, causing him to turn suddenly and he was unable to turn back. When I got to his place a half an hour later, found him sitting outside the house on a chair, head still twisted to one side. I did what looked reasonable in his case—tried to stretch his neck and turn his head—and I succeeded only partially, as I have learned since, as he never fully recovered, and I now believe if I had treated his case then, as I now do, three or four treatments would have corrected his trouble just as completely as we do our dislocated shoulder joints, but as it was the patient always suffered with headache, stiff, tired neck and died three or four years later with a stroke of paralysis.

*Case 2.* A. J. W. C., Maple Park, came into my office in August, 1914. When asked to take a seat he declined, saying it was too difficult to get up again. He carried his head to one side; his neck was rigid on the right side and lax and flabby on the left. Ten days before while tending the trip-rope on a hay fork, the load going up let loose and struck him on the head producing what the doctor called concussion of the base of the brain and severe strain of the muscles of the neck. The physician saw him twice a day for five days, and then told him there was nothing

to do but to let it wear off, and he was constantly getting worse. Unable to lie down, unable to eat or sleep from the pain, and as he said, stiff neck and back. This man was six feet four inches tall and weighed 170 pounds.

*Case 3.* G. H., Malta, neck dislocated turning over in bed at five a. m. I got out there about 10:20; he and his wife say he had not moved a quarter of an inch since he turned and heard the snap in his neck; pulse 44 when I arrived.

Mr. H. died very suddenly about eighteen months later at a barn raising, died on the way home in a buggy. Did he have a return of his subluxation? When I saw him with a subluxation lying still in bed he had a pulse of 44. What might it have been riding home in the buggy after being stricken at the barn raising?

*Case 4.* A. D's man, 1915, was jerked violently by a horse which he was leading to water; severe pain in neck immediately; unable to eat or sleep. When I saw him he had been to the doctor every day; upon examination the right side of the neck was rigid, the left side lax; had lost eighteen pounds in ten days.

Treated him three times afterwards. Complete and highly satisfactory cure from patient's report.

The following histories are taken from a list of something over ninety cases which I have treated since August, 1916, and are not selected to bring out favorable results, but to classify conditions with results of treatment; and I will state here that if your diagnosis of subluxation is correct and they are reduced, you may expect every case to be improved and more than fifty per cent of them to be cured, and I refer to chronic cases of from three to twenty years' standing. All your acute subluxations you will cure in from one to four treatments, and when I say "acute" I mean the stiff neck, the acute cervico-brachial neuralgia, the acute lumbago, and so forth.

*Case 5.* The night of September 16, 1916, I was called to the country to see Miss N. N., twenty years old; found her sitting in a chair, head bound tightly with a towel, muttering and in a state of hysteria. The history from her family was, that she had been having these same sort of attacks for three years, every two to four weeks, and had been seen by seven different physicians during that time, who had diagnosed her trouble as gastritis, gallstones, duodenal ulcer, ulcer of the stomach and hysteria, and five of the seven had given her a hypodermic of morphin each time when called.

I looked over the abdomen and chest for troubles; found nothing, then examined her spine, found rigidity over the third cervical, sixth dorsal and ninth dorsal vertebrae, reduced the cervical and sixth dorsal with sharp distinct snaps, followed by sufficient relief that after three hours she went to sleep and slept all night. Came to my office September 20. Both had returned

to a state of subluxation and were reduced much easier, and with them the ninth dorsal, which I could not reduce at my first visit. She had ten treatments from September 20 to February 5, and since September 20 has not had one of her attacks.

On further inquiry I found that she was thrown from a horse five years ago and now that she is relieved of her back symptoms, she says they started soon after her fall, but continually grew worse, while all her pains and discomforts were referred to the front of the trunk and abdomen.

Patient and parents consider her completely cured.

*Case 6.* Miss M. C. De Kalb, fifty-one years old, consulted me for headache of fifteen years' standing and constipation of longer standing; had taken a 2-grain cascara pill every night for eight years. Examination revealed subluxations of the third cervical and fourth and fifth dorsal vertebrae; reduced them September 16, 23 and October 4, 1916. Did not see her again until April 18 this year when she reported saying the last week she felt that she needed another treatment and that she had had no headache since her last treatment, October 4, 1916, and no trouble with constipation. Examination revealed slight subluxation of third cervical, reduced easily. Says she is better than she has been in twenty years.

*Case 7.* Miss C. B. Cervico-brachial neuralgia most of the time for the last three years; had been treated with all the anti-neuralgic, anti-rheumatism remedies, all kinds of lights and vibration, mostly by myself. But when she returned in November, 1916, saying her old trouble had returned, I examined her spine and found the fourth cervical, fifth and sixth dorsal and ninth dorsal subluxated, and in four treatments had them reduced and her severe neuralgia cured, and by taking two treatments this year, eight weeks apart, she has kept free from all neuralgia and not one dose of medicine.

*Case 8.* Miss L. S., Maple Park, was leading a horse behind a buggy when it jerked back and pulled her out of the buggy, over the back seat and I saw her two years after while making a visit to her mother. Her history was, continued head, neck and backache. This was three years ago, and I had thought but little of subluxations, but did conceive the idea of stretching her neck and back by lifting her by her head, she weighing less than one hundred pounds and these stretchings were so satisfactory to her in relieving her headaches that they had paid me seven dollars, more than once, just to drive out to their place and lift her by the head a few times. Since making a study of subluxation I found and reduced the third and fifth cervical vertebrae with most gratifying relief.

*Case 9.* Mrs. H. W., sent for me January 15, 1917, with the history of constant headache for over two years; had taken numerous headache tablets and some various treatments; said she woke up with a headache, went to bed with it and if she woke in the night it was still there, and she was getting desperate. Examination revealed second cervical and fourth and fifth dorsal vertebrae subluxated. I reduced them that

night. I saw her April 18 and she says she has never had a headache since that night.

*Case 10.* B. S., Cortland, driving a Ford poultry wagon, came to the office with his wife, and just as he was leaving said, "I don't know whether you could do anything for my backache. It's so bad I'm afraid I'll have to give up my job." I examined him as he was standing up and discovered a subluxation of the fourth lumbar and tenth and eleventh dorsal; reduced them standing up and his report is that for three days he couldn't get out of the house, but since then never has had the backache and pains.

*Case 11.* J. S., lumbago of three years' standing; reduced subluxation of ninth and twelfth dorsal vertebrae just once; never has had a return of the lumbago.

*Case 12.* Mrs. E. E. Waterman, persistent headache; found and reduced third cervical subluxation; relieved of headache for six weeks; returned for treatment April 18.

*Case 13.* A. W.'s daughter, eight years old, complained of lame side and hip for eighteen months; fourth and fifth lumbar vertebrae subluxated; reduced standing up; one treatment; cured completely; no return after two months.

*Case 14.* Mrs. W. constant headache; subluxation third cervical; came to office every week for four weeks, each time reducing the subluxation and curing the headache. Now, comes about once in four weeks, only when she feels the headache coming on; treatment takes about thirty seconds.

*Case 15.* B. J., December 6, 1916, driving over the east pike in an open roadster automobile; the driver got confused by bright approaching lights and drove off the pike and the car in tipping over, pinned Johnson under it. He was under the car about ten minutes. When I saw him at the hospital he had a complete paralysis of the right arm and partial paralysis of the left. Examination revealed a complete dislocation of third from fourth dorsal vertebrae, which I reduced by lateral pressure on the right lamina and spinous process, while strong traction was being made by the occipito-mandibular hold, followed by some sensation in right arm in about three quarters of an hour.

Next morning partial return of the displacement reduced much more easily than the night before, Doctor Rodney Wright being present and feeling displacement of vertebrae and their return to place and even beyond complete replacement, showing the extreme relaxation of its retaining ligaments. This vertebrae, after a week in the hospital, and each day being manipulated, as each day it displaced less, became fixed in nearly normal position. Nearly, I say, for the injury must have caused some thickening of the articulating surfaces, as there is some thickening and rigidity on the right side. On April 10th, I examined him and found that he had recovered, at a rough estimate, about eighty per cent of the usefulness of the right arm, and complete recovery of the left arm.

*Case 16.* Now, in another class I will report: Mrs.



S. T., whom I have prescribed for and treated for twenty years, all this time backache, headache, constipated, coated tongue and extremely nervous, all dating from a fall twenty-five years ago aggravated by a severe fall on a cement walk in the winter of 1915, since which time she seemed to have what was either an infected gall-bladder or bile ducts, coated tongue, jaundice, fermentive dyspepsia, and all the symptoms that go with these troubles, and the only time that she was at all comfortable was when taking large doses of sodim phosphate, calomel; about once a week and cholethic pills after every meal. October 27, 1916, I reduced subluxations of third and fourth cervical vertebrae, November 4 reduced fifth, sixth, and seventh dorsal and third lumbar; between November 4 and January 1, 1917, I treated her six times and when she left for California she took a small box of laxative pills just to have them should she need them. She has not had a particle of her old trouble since January 1.

*Case 17.* Mrs. D., March 13, I was called to see her for neuritis, as she called it; had been treated for the acute attack, cervico-brachial, for two weeks with no relief and was in bed when I called; on that visit I reduced a third, fourth and fifth cervical subluxation with almost immediate relief; visited her a week later and reduced the same cervical and fourth, fifth, sixth and seventh dorsal; the next treatment she had at my office and at that time told me she was relieved of a chronic digestive trouble she had had fifteen years. She has had four treatments at my office and a more pleased patient I have never had. She has gained twelve pounds since March 13 and eats anything she wants without distress.

*Case 18.* January 25 Miss E. D. consulted me, what you might term a physical wreck, with every symptom—sleepless nights, sciatic, unable to eat, anemic, roaring in the ears, headache and tachycardia, pulse 130. Examination revealed subluxations of second cervical; fourth, fifth, sixth, seventh and eighth dorsal vertebrae and an unusual condition all on the right side; the second cervical was reduced the third treatment; the dorsals were all reduced during the next four treatments. She has had in all, to date, twelve treatments. Headache practically gone; sleeps fairly well; sciatic no annoyance to her; pulse 80; has gained fourteen pounds since January 25. During her last call at my office April 17, she made the remark, "My worst days are twenty per cent better than my best days have been for the last five years. My victrola is gone"—meaning the noises in her ears which she said were so loud that she felt sure anyone in the room with her could hear them.

Now, Doctors, I am not giving these histories and results of my treatments to brag or to make you think I am doing great things, but to try to show you enough about these subluxations and their treatment to get you interested sufficiently so that you will look into the subject and get these satisfactory results yourselves, not with

some new, untried remedy or treatment, but with a method scientifically applied, which has been in vogue for centuries, as the Bohemians, Germans and Hollanders found centuries ago, that by having their larger children walk up and down their spines, making pressure first on one side and then on the other, numerous acute and chronic ailments were cured.

Scientific men, familiar with the customs of our native Indians tell us that methods similar to those of the spine adjusters of today were used by their tribes as long as these aborigines could remember. They found that when one of their warriors or hunters became incapacitated for his vocation through chronic sickness, or as they believed, by being inhabited by the evil spirit, he was tied to a tree and his back vigorously pounded and these cures were most satisfactory, simply because it was just another way of relieving subluxations. And coming down to modern times, we are all more or less familiar with the fact that among athletes forcible striking of the back on each side of the spinous processes is often resorted to for the purpose of restoring to normal, the action of the heart and respiration of one of their members who is injured.

And how many times have you heard of a person being thrown from a buggy and getting up to find he has been relieved of a permanent lameness or pain by subluxation being produced by the fall?

If this paper, up to now, has made some of you feel that in the future, after looking your patient over thoroughly and being unable to find a cause for his ailment, that you will examine his spine, not expecting a tubercular spine, or a curvature of the spine, but for a possible subluxation, you will eventually be able to keep most of your chronics. Not very long, however, for you will cure better than forty per cent of them and benefit most of the others, and at least find out for them the same thing the osteopath or chiropractic will, if they go to them.

We have the advantage of the new-coming osteopath or chirapractic, as we are already here; know the people; have them coming to us; and if we do not neglect this important part of our examination and treatment, in connection with our knowledge as to medical and surgical treatments, when needed, we should be able to stop the inroads these men are making into our busi-

ness and at the same time have the satisfaction of curing a class of cases which we heretofore have been able to do but little for, such cases as I have mentioned in my list.

After these remarks and histories, many of you are still skeptical; think the snap we get when we reduce a subluxation indicates nothing and could be produced in any vertebræ. But, nevertheless, none of you can get away from the fact that cures are what you are after, and how you get them makes little difference. It is just to get them. Now, if these cures are produced by some mental impression, as some of you say, what is the difference? Does it make any difference whether you get your results from diet, materia medica, operations, mental suggestion, hydrotherapy, prayer or fright? No. Therefore, my pointer is to look for these troubles, study the subject carefully, try the methods of diagnosis and then try the treatments.

There is one great trouble with all of us. We get into a rut. Now, that is bad enough, but what is worse is staying in the rut, and the only difference between the rut and the grave is, the grave is a little deeper.

My last pointer is, "Doctors, get together"; and instead of having the "DeKalb County Medical Society" have it, "The DeKalb County Co-operative Medical Society" and make it so in every sense of the word, co-operation.

The Chicago Medical Society brought out in one of their meetings this motto: "It behooves the medical profession to begin to hang together; they have too long hung apart."

Springfield, Illinois, March 12, 1917.

Dear Doctor:

It is of *greatest importance* that *every* member of the medical profession shall *immediately* take an *active* part in *defeating* legislation now pending in the legislature at Springfield.

It is equally important that you lend your active support to certain *other* legislation which is of utmost importance to you and to the public generally.

*House Bill No. 266 must be defeated.* If this bill passes it will confer upon osteopaths the right to practice medicine and surgery in all their branches without requiring that they shall meet the same educational standards as are imposed on physicians. It establishes two standards of medical education—low standards for osteopaths, high for physicians.

It is a vicious bill in many respects and must be defeated. *It will pass unless you and all other physicians get busy now.* See, write or telegraph to your representative and senator at Springfield to oppose House bill 266. *Do it today.*

The rest of these letters you have all read, but heed the final instruction.

Finally, let us again hope that you interest yourself in this legislation and get your friends to do likewise. Get in close touch with your legislators. Remember this: The 800 osteopaths of the state have always been able to make a bigger impression on the legislatures than have the 12,500 physicians, because they *all* get busy in behalf of the legislation they want. They will *get what they want this time if you don't get busy too. Attend to this today.*

Yours truly,

DON W. DEAL.

This letter in itself should be incentive enough to make us turn over a new leaf and work as a unit, thereby having strength as a profession, as it is only in co-operation or union that we can attain strength, and not only that but how much more pleasant it would be doing business in that kind of atmosphere.

It would be a struggle full of hard work, a regular re-making for most of us, but it is possible. First, by having meetings every month; not in the afternoon, but one evening a month. All of us should be able to spare one evening a month to get together and to get thoroughly acquainted and thoroughly agreeable and at these meetings do everything for the betterment of the members of the De Kalb County Co-operative Medical Society, first, in preference to any members of any other society anywhere, and in the days and nights between these meetings, look out for the interests of any and all members.

Let the public understand that the medical men of De Kalb County stand together; let them understand if their family physician needs help in any way he will call for it early and as much as he needs and know that they will work together to the best of his interests as well as their own.

To even start to enumerate the advantages of such an organization would get me into such a bulk of paper that we would all be late for supper, so I am going to close, and as a starter, as I believe, in the right direction, I want to make this motion that you, Mr. President, appoint a committee of five members to be designated as "The Committee on Co-operation," their duties to prepare and read papers on any subject or subjects that tend for the betterment of the medical profession of De Kalb County, professionally, physically, morally, intellectually, and last, but not least, financially! And the benefits derived



from such a committee as a part of a co-operative medical society would certainly put De Kalb county on the map!

## A DIAGNOSIS AND TREATMENT OF MORAL DISEASES.

E. N. STENN, M. D.,  
CHICAGO.

The past fifty years has won a great victory over mortality and infectious diseases by reason of the progress of bacteriology and sanitation. But while contagious diseases have gradually diminished, we see on the other hand that moral diseases are growing more numerous. While typhoid, smallpox and diphtheria retreated before our remedies, insanity, suicide and all forms of crime are advancing, and this makes it very evident that we should find some explanation or diagnosis of these moral diseases in order to arrive at some effective remedy.

At the dawn of the 19th century Dr. Henrotin wrote that "insanity was a moral sin of the insane" because, as he argued, "no one becomes insane unless he forsakes the path of virtue and of the fear of the Lord." On this assumption, gentlemen, the insane were locked up in dungeons, loaded down with chains, tortured and beaten because their insanity was their own fault. At that period Pinel of France, advanced the revolutionary idea that insanity was not a sin but a mental disease. This idea is now a commonplace one, but in his day and time it revolutionized the treatment of mental disturbances. We know now that insanity is a result of two factors, hereditary transmission and influence of environment. We know now that the individual insane patient is not much to blame. We know now that man does not become insane because he wants to, but rather because he cannot help it. We have as much insanity as we deserve. Insanity, like tuberculosis, is a social disease and society is responsible.

As to crime, which of course includes prostitution, the general opinion of lawyers, judges, and the people at large, is that crime involves a moral guilt because it is due to a free will of the individual who leaves the path of virtue and chooses the path of crime. This is to this day the

current conception of crime and prostitution. According to this conception the assumption is that one can choose freely between virtue and vice. But modern psychology holds that there is no free will and demonstrates that every act of a human being is the result of an interaction between the personality and his environment. Erico Ferri of Italy, holds that in order to be a criminal it is necessary, to use his own words, "that the individual should find himself in such personal physical and moral conditions and live in such an environment that he cannot do anything else but be disposed toward crime." The idea of a free will is an illusion. Humanity has ever been fond of illusions. Time was when people believed that the earth was the center of the universe and that man was the center of creation. But Copernicus and Galileo came along and demonstrated that the earth does not stand still and that it is a grain of matter hurled into infinite space and rotating around the sun. All species of plants and animals were supposed to be created for man's use and pleasure. But in 1856, Chas. Darwin came along and destroyed the illusion that man is the center of creation.

The great remedy against crime has always been punishment. Bentham said, "Every time punishment is inflicted it proves its inefficacy, for it did not prevent the commission of that crime. Those unfortunate individuals who are struck by the law do not improve but become more antisocial through repeated relapses. When a serious crime is committed in this city the police turn their attention immediately to the ex-convicts. A future punishment does not prevent the commission of a crime. A man who is carried away by a violent passion is not checked by threats of punishment, because the volcanic eruption prevents him from reflecting. "Now a counterfeiter in committing his crime," says Flangieri, "must compel his mind to imitate closely the inscription of bill, letter for letter, including that threatening passage which says: The law punishes counterfeiting, etc., etc. Surely the counterfeiter cannot ignore the penalty that awaits him."

Crime is a natural and social phenomenon. Every crime, from the smallest to the most atrocious, is the result of the action and interaction of three principal causes, according to the positive school of criminology; the anthropologic

\*Read at the meeting of the Stock Yards Branch of Chicago Medical Society, May 17, 1917.

condition of the individual, the telluric environment in which he is living and the social circumstances in which he is born, living and operating. There are those who consider poverty as the sole cause; if that were so, 1,000 out of every 1,000 poor ought to become criminals or prostitutes. It was Cesare Lombroso who made a solid contribution to the subject of criminality by making anatomical studies of body and brain of hundreds of criminals, and in his book, "The Criminal Man," he emphasizes the importance of seeking the explanation of crime in the physical and psychological condition of the individual. He maintained that we must first understand the criminal who offends before we can study and understand his crime. Lombroso's work, by the way, adds a mass of evidence against the doctrine of free will. It is to Lombroso we owe the credit of working out the anthropologic factor in the causation of crime, but his weakness consists in trying to remove not only the responsibility of the criminal, but also the responsibility of society. I like, however, his reasoning when he argues that society has no right to punish a man for coming into this world with a crooked nose or a misshapen head, neither can it have the right to punish him for what that head may compel him to do.

Of the second principal cause of criminality which is the telluric influence, Ferri says that in persons where the social life is the same the year round, breaches of discipline are more frequent in the warm months of the year. Crimes of sex are more frequent in the warm countries. Crimes against property occur mostly in winter. Crimes against the person are more frequent in hot countries and in all countries in the hot season. Jules Verne showed that a high altitude produces hilarity, and it has been argued that the Dutch are slow because they are low. A change of season brings with it a change of criminality. Buckle, in his history of civilization, gives civilization a physical foundation by finding its chief factors in the climate, geography and geology of the country. This is what we term the telluric environment.

The third principal cause of criminality is the social environment. Now, it is quite evident that economic misery has a great influence on criminality. The finest word picture which I

came across in reading up the subject is by Enrico Ferri:

Want, is the strongest poison for the human body and soul. It is the fountain head of all inhuman and antisocial feeling. Where want spreads out its wings there the sentiments of love, of affection, of brotherhood are impossible. Take a look at the figures of the peasants in the far off land of Campagna, the little government employe, the shopkeeper, the laborer. When work is assured, when living is certain though poor, there want, cruel want, is in the distance and every good sentiment can germinate and develop in the human heart. The family then lives in a favorable environment, the parents agree, the children are affectionate, and when the laborer, a bronzed statue of humanity, returns from his smoking shop and meets his white-haired mother, the embodiment of a half century of immaculate virtue and heroic sacrifices, then he can, tired but assured of his daily bread, give room to feelings of affection and he will cordially invite her to share his frugal meal. But let the same man in the same environment be haunted by the specter of want and lack of employment, and you will see the moral atmosphere in his family changing as from day to night. There is no work and the laborer comes home without any wages. The wife reproaches her husband for the suffering of his family. The man having been turned away from the doors of the factories feels his dignity as an honest laborer assailed in the very bosom of his family. And the bonds of affection and union are loosened in that family. Its members no longer agree. There are too many children and when the poor old mother approaches her son, she reads in his dark and agitated face the lack of tenderness and feels in her mother heart that her boy, poisoned by the specter of want, is perhaps casting evil looks at her and harboring the unfilial thought. Better an open grave in the cemetery than one more mouth to feed at home.

Of all the forms of crime that affect our present civilization or degeneration, the one in which social conditions are most plainly the leading cause is surely prostitution. Society is the real offender and not the unfortunate creature who is more sinned against than sinning. Dr. Joseph Greer of this city, in his pamphlet, "The Social Evil," says, "Modern prostitution is the logical outcome of centuries of abuse, oppression and robbery; woman, being the weaker sex, has suffered most and given most, but her vice is but the vice that men have pushed her into."

It is true, as some of you may argue, that want alone is not sufficient to make criminals of the suffering family, but we do hold that crime in all its forms is the result of the action and interaction of three forces, the anthropologic, the telluric, and the social. This gives us a clear under-



standing of things far better than the current idea that a man is a criminal because he wants to be.

So much for an explanation or diagnosis of moral diseases. Now what is our treatment? Just as it is nobler in the human mind to prevent war than to heal the wounded, so it is nobler to prevent crime than to punish. The remedies of the past concerned themselves not with the improvement of life but rather with the dispensation of justice or punishment. Punishment has always been imposed after the deed had been done. Punishment is a remedy directed against effects but it does not touch the cause. Penalties have the same relation to crime that medicine has to disease. After a disease has developed a doctor is called in, but he cannot do anything else but to reach the effects. On the other hand, if the individual and community had obeyed the rules of preventive hygiene the disease would probably have been avoided eighty times in one hundred. Our own Dr. Whalen states that probably fifty per cent of all cases of disease and seventy-five per cent of accidents could be prevented by reasonable precautions. Just as preventive medicine means application of remedies before disease becomes apparent, so the preventive treatment of criminality concerns itself with the application of remedies before crime becomes apparent. The legislator should apply the rules of social hygiene in order to reach the roots of criminality.

Right here you might say all this is very well in theory, but it isn't practical. So to be practical, if a crime is committed, punishment may be employed as one of the remedies, but it should be the very last and not the exclusively dominating remedy. Punishment strikes without healing those unfortunates who have fallen a prey to crime. In the majority of minor crimes committed by people who are not dangerous, the only punishment should be compensation of the victim for his loss. At present the victim is forgotten. For the graver crimes committed by persons inclined toward crime, segregation for an indefinite period. Under segregation the management must be scientific as it is now in our insane asylums. It is foolish to place an old soldier at the head of a penal institution. The director of Elmira Reformatory, which is probably the best penal institution in the world, is a

physician, a psychologist. When a criminal is brought in he is studied from the point of view of anatomy, physiology and psychology, and the results speak for themselves.

My plea is for the adoption of scientific methods in the prevention and treatment of the moral diseases. At present moral diseases are endemic, let us try to make them sporadic.

## PSYCHOTHERAPY IN OBSTETRICS\*

H. W. LONG, M. D.

ELMWOOD, ILL.

In the consideration of the psychical condition in obstetrics, we would not in the least minimize the work done along the line of surgery, antiseptics, therapeutics, etc. All have their place of usefulness and in their proper application excel every other means.

For some years past I have been interested in the study of heredity, particularly in the study of the mother during the gestation period, and as the opportunity offered I gave considerable time and care to the mothers soon to be. I listened carefully to the story they had to relate. I quieted their fears and anxiety the best I could, by explaining more or less the processes, what to expect and what to do. As a direct result of this I soon discovered that as a rule the psychic balance in those cases was good. Then I gave some attention to the psychic condition and in a majority of the cases obtained the most delightful results. The gestation and confinements were robbed of most of their terrors, but little if any nausea or discomfort during the period, the average time of labor much shortened and easier. No forceps, operations or lacerations, and no post partum hemorrhage, when time and attention could be given to get in harmony with the patient and obtain her co-operation.

Nearly all of my unpleasant experiences have occurred when I was called at the eleventh hour or too late to get acquainted with the patient. Very often one can break through the reserve and do very well, but too often we found it impossible.

I believe that by giving some time and attention to our patient all through the period of gestation, looking carefully into the psychic condition, as well as the general health, that we will save some lives, will most assuredly give our patients a normal and easy confinement, and oc-

\*Read before Peoria Medical Society, June 5, 1917.

casionally with a total absence of any pain or suffering, our patient will make a rapid recovery and a complete involution.

This phenomenon has been noticed and we have been given the benefits of quite a number of observers and writers. To take note of just a few, e. g., Sadler calls our attention to the fact that the psychic conditions are not being given sufficient attention.

De Lee admits the too frequent use of anesthetics; and says that the direct result of the administration of morphin and scopolomine has increased the frequency of forceps operations, lacerations and post-partum hemorrhage. He also strongly condemns the use of pituitary extract, except in a real scientific indication.

Hillmer has obtained very rapid and uncomplicated deliveries by administering blue and black cohosh during the gestation period, although recent pharmaceutic investigations tend to prove that neither of these drugs have any very considerable influence on the uterus.

Almost every author and operator realizes the need of a well balanced psychical condition, but we have not been favored to any extent with methods for obtaining it. The fact of the matter is, it is not always so easy to do. There are a multitude of things and conditions to consider which are never the same in any two patients. There are also numerous methods of obtaining results. No routine method will produce the best or uniform results in all cases. A general plan may be devised but the minor detail must be bent and arranged to fit the needs of the individual.

In this discussion we will only consider the mother soon to be, who is physically normal; and it will best apply to primiparæ.

Perhaps it would be just as well to note some of the adverse conditions that should be overcome or changed for more favorable ones. The first is the tendency of the profession to give too little attention to the patient in the early months of gestation and this probably leads to the second—which is the habit of the patient of putting off the consultation till gestation is far advanced.

Another thing that is very troublesome and harmful and one that is very difficult of control, is the habit that some ladies have of recounting their own experience and that of others. The more difficult and terrible the experience the bet-

ter it suits their purpose. They seem to take delight in filling the young mother's mind with tales of suffering and predict for her a terrible time. If this pernicious habit could be safely and completely buried it would remove a mountain of trouble. And the worst of it is, that it is not confined solely to the ladies. I have known some otherwise very good doctors to engage in this same habit, thus unwittingly inviting themselves into trouble, because it is a well known fact that any suggestible person may very readily assimilate a condition thus described, and having once done so, it may and very often does, get beyond her control, and until such a patient is relieved, most anything in the catalogue of nerves and many physical troubles may come to pass.

Too great a show of sympathy, or as a prominent Judge puts it—"a sob sympathy," is very destructive to the patient's will power and self-control.

An undue haste on the part of the accoucheur or the midwife is very destructive to the best interests of both the mother and the child. An unnecessary delay in the face of physical disability is just as pernicious.

We will now note some of the conditions that are more favorable to both the mother and the child. It has been my experience that if the mother is seen early in the term of gestation and can be interested in the affairs of life, in the care of herself and in her plans for her child, and will come to the office every week or two, make a report and receive counsel, that we have but very little trouble in keeping the psychic condition in a perfect balance. In this way the mental as well as the physical conditions can be followed, and any deviation from the normal can be found early and corrected before permanent injury results.

It has been found that frequently the mental changes that take place at this time are fully as noticeable and sometimes more pronounced than the physical and still remain within the range of the normal. The mental faculties undergo an evolution—a change more or less noticeable and permanent. These changes very often cause the patient some surprise and occasionally serious disappointment. And these are things that we want to give some attention to, so that our patient will not be surprised but train her to look for and take advantage of those changes. Otherwise,



when these strange mental actions—such as changes in disposition, likes and dislikes, fits of temper, crankiness, impatience, forebodings, and increased timidity come on, she will be entering a new world, much of which she only partially understands, and if left to her own devices very frequently becomes doubtful, then anxious and finally fearful of the coming event.

For some time it has been my habit to acquaint my patients with the process so that as the changes of gestation arrive, they have been looking for it and know its cause and the results to expect, and so are not worried or alarmed.

Few folks know how to relax and rest. Too frequently they rest like the Indian sleeps, i. e., with one eye open.

To rest thoroughly the entire muscular system must be completely relaxed. This is perhaps easier done than the next step, which is to relax the brain; and do not think; to accomplish the best results one must make the mind a blank, and after some training one can hold the mind blank for quite a while. Each patient is urged to practice relaxing and resting a few minutes several times daily, especially towards the close of the period.

More rest and refreshment can be obtained in ten minutes when properly done, than in one hour if the patient is under a strain physically or has some mental worry that keeps her mind whipped up and going all the time. If our patient succeeds well in relaxing and being able to control the mental functioning, we predict for her a normal and very easy confinement. Nausea and vomiting under such conditions become a negligible factor. I have never had the misfortune to meet a case of uncontrollable or pernicious vomiting.

Among other things she is told that pregnancy and confinement are normal and physiologic processes. This is the way the Lord has provided for us all to arrive. And as a normal physiologic process it should not be attended with any considerable amount of discomfort and suffering. There will be some work but no suffering to any extent if everything is normal.

When the contractions for parturition begin she has been made acquainted with the entire process. She knows what it means, what the results will be and the average time required. She will maintain the upright position or better, move about busying herself with her usual house-

hold duties, giving little attention and no assistance to the contractions at this stage, reserving her strength for a time when it will be more useful. When the dilatation has become somewhat complete she is encouraged to give some assistance to the contractions.

Should the contractions show a tendency to decrease in force and frequency she will take a kneeling position, resting her arms and head on the edge of a chair or the bed; or better still she may take the squatting position and sometimes this position is made more comfortable and easier maintained if the back is supported by the wall or some firm object. While in this position the thighs may be pressed against the abdomen by the patient clasping her arms around her knees. In this position gravity and the application of external force by the thighs, increases the expulsive force very materially. Occasionally a patient will think it impossible to assume this position; in such a case the patient should be assisted to assume the position slowly. As a rule it will only be necessary to maintain this position for a few minutes at a time and not a great number of times for engagement to take place.

Our patient is directed to relax and rest between the contractions. The more completely she can relax and rest between the contractions, the more perfect and rapid will be the dilatations.

All the conversation should be of a cheerful, optimistic and suggestive character. A nurse or an assistant who can relate an amusing incident, or give a good hearty laugh upon the proper occasion is worth many times more than one who tip-toes about and converses in awed whispers, or one who is uncongenial to the patient.

Soothe and encourage your patient—have her relax between the contractions—let loose and rest. If everything is going on right the perineum will be found soft and ready for full expansion needed for delivery.

If the perineum is somewhat rigid and the patient has a tendency to be nervous, complaining and apprehensive, she is not relaxed and is not responding well to the suggestions. Slow down and let her rest, look to her comfort. If she can compose herself sufficiently to sleep a cat-nap or two between contractions, the relaxation will be much more complete, and delivery can now take place without any serious injury or suffering.

If the above plan falls short, which it will at

times, a few whiffs of chloroform will aid your suggestions very materially.

Permit me at this point to make a few observations as to the management of chloroform. We should remember that it evaporates very rapidly in a dry atmosphere at room temperature and that it produces a *heavy* gas. At the beginning only a few drops should be placed on the mask, and the mask should be held four to six inches above the patient's face for a few respirations and then gradually brought down close. A little carelessness and too free use will allow the accumulation of sufficient gas in the bedding and room to keep the patient drugged and logy for several hours. Chloroform lends itself as an aid to suggestion much better than ether.

It is much more pleasant to take, is less stimulating, causing less irritation and excitement. In fact, the exciting stage and the nausea of chloroform anesthesia can be eliminated entirely in the majority of cases by properly administered suggestions, and at the same time obtain the most pleasing results with a surprisingly small quantity of the anesthetic.

If necessary the patient can very frequently be carried into complete hypnosis without the aid of an anesthetic. When this is desirable and possible, the results are most satisfactory. The elimination of fear, nervousness and pain is just as complete and much more satisfactory than by any other method. It leaves in its wake no nausea and vomiting, headache or post-partum hemorrhage. The tissues dilate more readily, thus reducing to a minimum lacerations and forceps operations.

Great care should be exercised in the selection of nurses and assistants. They should be congenial and in harmony with the patient, and trained specially for this work.

#### CONCLUSIONS

It may be said that as a general rule suggestions are received in the same spirit and faith in which they are given.

The careless use of suggestion is on a par with the shotgun prescription and just about as certain of producing definite results.

The effects or results are not always immediate—hence it follows that one must be willing to lavish time and patience when required.

Even after much experience the reaction of any given patient cannot be foretold, and so, for

obstetrical work the best results will be obtained only when the patient and physician have faith and confidence in each other, i. e., when tests and trials have been made so that each knows what to expect of the other.

When the effect can be obtained by suggestion or hypnosis, that we have been obtaining by drugs and anesthetics, the results are far superior. There is no after effect, such as shock, post-partum hemorrhage, nausea, headache, or nervousness. It will leave the patient composed and comfortable.

#### BIBLIOGRAPHY.

- DeLee, J. B., *Jour. A. M. A.*, Oct. 14, 1916.  
Hillmer, Raymond E., *Ill. Med. Jour.*, May, 1915.  
Sadler, W. S., *Ill. Med. Jour.*, May, 1915.

### THE FOREIGNER A PREY OF MEDICAL QUACKS\*

HENRY R. KRASNOW, M. D.,  
CHICAGO

*Mr. Chairman, Ladies and Gentlemen:* The title of this paper tonight is rather misleading. It would be more just instead of "The Foreigner a Prey of Medical Quacks," to call it "The Foreigner and The Medical Profession a Prey of Medical Quacks."

This meeting being devoted to economical questions which affect or may affect the medical profession, I thought it would not be amiss to discuss the medical quack, which is a factor of long standing in the economics of our medical fraternity, and, due to the chronicity of it, is paid very little attention to by the physicians.

It seems that one great effort in this direction was done for us a few years ago by *The Chicago Tribune*. The work done in the relation to quacks and patent medicines by the American Medical Association, while indirectly having helped the work of the *Tribune*, has had very little effect on the well being of the medical profession. The reason being, that the exposures by the *Journal A. M. A.* of the quacks and patent medicines has been limited to the medical literature only, which is not read by the laity. The work of the *Chicago Tribune* though, has done a great deal of good to our profession by opening the eyes, at least, of a part of the English reading public. I say, a part of the public, because in the majority of other newspapers the quack advertisements are still appearing on their pages,

\*Read before the Chicago Medical Society, Douglas Park Branch, January 16, 1917.



and in all probability are a paying proposition for the quacks, otherwise they would have stopped them long ago. But the evil of the quacks, since the exposure in the *Tribune*, has manifested itself to a considerably greater degree on our foreign cosmopolitan population, which has not been touched by the English papers. This is evidenced by the fact, that since the time of the above mentioned exposure, the foreign newspapers, Polish, German, Russian, Hungarian, Lithuanian, Bohemian, Italian, Slovenian, etc., have doubled or trebled the space of the quack advertisers.

It is true that some of the branches of the Chicago Medical Society may not see or feel the economical injuries produced by the quacks to the medical profession, but our branch and other similar branches, whose members find their practice mostly among the foreigners, ought to open their eyes not only to the economical loss they sustain through the practice of the quacks, but also to the fact, that the REGULAR profession is getting discredited in the eyes of the foreign population through the fraudulent and dishonest actions of the medical charlatans.

The foreigners, as a rule, do not differentiate between the regular physician, who does not advertise, and the advertising quacks. Quite the opposite; they look upon the advertising charlatans with considerably greater respect than upon the regular physician, as in their childish simplicity, they look upon everything printed in the papers as absolute truth. They do not understand even, that an advertisement is written and paid for by the advertiser, and innocently think that it is the newspaper that praises those physicians, because they are so good.

In order to understand the economic evil to the medical profession which quack practice brings, though we cannot bring correct statistical data, I think it will be enough to consider some of the following facts.

I have it from good authority, from a druggist who was in the employ of one of the quack offices, that the income of this office was, in the average, seven thousand dollars a month, that they paid ten thousand dollars a year rent for the office, that they had in their employ two licensed physicians, one a "case taker," the brains of the institution, getting four hundred dollars a month plus commission above a certain income, and one other doctor for the treatment of patients (by the

way, a cocaine fiend), at a salary of one hundred and fifty dollars a month; a druggist on a salary of two hundred dollars a month and commission; an artist, making the models for the anatomical museum in connection with the office, also three or four other employees. No major operations at the fees the ordinary surgeons are getting, have been performed by them; the practice has been merely office practice, such as neurasthenics, genito-urinary practice, stomach and other internal diseases. The above described office is typical of all similar institutions.

Most probably every one of us remember, during the *Tribune* exposures, that when the mail of a certain quack was arrested by the government, it was found to contain in cash, for two days, over a thousand dollars.

One of the prominent Chicago quacks, a licensed physician, the "king of the quacks," so far as the amount of advertising goes, advertises not only his miraculous cures, but also his palatial residence which was lately built by the money earned in his wonderful practice.

This quack practice did not escape the eye of the shrewd business man. Medical offices, or so-called "Institutes," often connected with anatomical museums, one after another began to spring up in Chicago and all over the United States, controlled by laymen, who engaged licensed physicians and druggists to run their business. One of those artists is known to me personally. Years ago a poor drug clerk, later a druggist and assistant manager in a fake medical "institute," started about five or six years ago on his own hook, and later he had two institutions in Chicago and some two or three in other large cities in the United States. He is now opening another one in Chicago. From a sixteen dollar clerk, he lives now in a palatial residence on Grand boulevard, talks in thousands and tens of thousands, instead of single dollars and cents as before.

We must not lose sight of another type of quacks, which is not numerous, but very prosperous. These are the midwives, the manufacturer, so to say, of concoctions from herbs and other "old country" recipes, and the well known among the Russian, Polish, and German-Hungarian population, under the general name of "feldsher," which is practically a male nurse in the old country.

One of these types is in our midst on the west side, whose business in a Russian village was that of a barber and bloodletting. Notwithstanding the numerous indictments against this "professor," as he calls himself, his fortune grows; he is a possessor of three drug stores and of considerable real estate, and every new arrest means to him nothing more than a fine of twenty-five or fifty dollars, because his experience in Chicago made of him not only a "medical celebrity," but a good lawyer, which legal talent he obtained through the instructions of the highest paid lawyers in Chicago.

Another similar artist is located on Halsted street. He does a lucrative trade through the medium of circulars distributed in saloons, groceries, barber shops, turkish baths, etc. He plays the part of a teacher by "lecturing" to crowds wherever he can gather them, and recruits his patients from the same crowds. Not being a licensed physician, and not a physician at all, all his sins are covered by a diploma of a licensed lady physician with whom he keeps office together. There are a few indictments against that so-called "Doctor," and for the last two years the Illinois State Board of Health has been after him. The investigator for the State Board told me, that they could not get hold of him for the last two years, as he is constantly moving from one place to another, and because of the deficiency of funds of the Board for such purposes. While the second statement may be perfectly true, the first one may be questioned, as it is known to the neighboring druggist, physicians and to myself, that for the last two years this celebrated "Doctor" is enjoying daily from his window a few whiffs of the refreshing Halsted street air.

Next to this, in the practice of quackery, must be put the advertising druggists and their free dispensaries. The window signs, "literature" in various languages, of these temples of healing bear guaranteed promises to cure "rheumatism, headache, pain in the back, syphilis, sexual weakness, gonorrhea, pimples, nervousness, skin diseases, etc., etc." With the exception, that I will add, that they not only "recommend" medicines, but also examine the patients and prescribe. We have now a case against one of them for treating and infecting a boy of about twenty years old.

Now, if we add to it the little fry of the ordinary druggist, who is tempted to make a few

extra dollars now and then by treating and prescribing for ignorant patients, we will cover the circle of quackery which deprives the regular medical profession of hundreds of thousands of dollars of their legitimate income.

If you will show me that any legitimate practitioner among the poor foreign population is able to keep such elaborate offices, pay the above mentioned high rents and carry on all the expenses the quacks are having—from office practice alone—then I will say, that all the above mentioned facts have no bearing on the welfare of our profession.

But I know that nobody can tell it. And if this is so, why then should we look on quietly, while we are robbed of our legitimate income by charlatans, impostors and blackmailers. And not only this, but as citizens, we should raise the cry against those robbers for pauperizing the poor and ignorant foreigners who cannot complain of a superfluity of money or even of a permanent decently paid job, as they are the most underpaid laborers, and, through extortions of the quacks, instead of rising in their health and in the standard of living, they are still more condemned to their insanitary conditions and insufficient and unhealthful food.

What is the reason of such a phenomenal financial success of the quacks, and how to overcome it?

1. Ignorance of the foreign masses.
2. Distortion of the idea of personal liberty by clever lawyers, which give to the quacks a standing in courts.
3. The quacks are organized. Their organization is rich in funds, and very able lawyers are in constant employ to defend any one of the members of their organization. And their funds, as I have heard but cannot substantiate, are very often used for illegitimate, as well as legitimate, protection, and lastly—
4. The apathy of the regular medical profession.

As to the means of fighting the quacks, I would not go into details. First, the causes above mentioned are to some extent indicative of the way in which we have to proceed in the protection of the poor foreigners and our own interests.

Secondly, the subject is naturally a very complicated one and will necessitate a considerably longer paper than the time I can spend.

Thirdly, I expect that in the discussion atten-



tion will be paid to the means of fighting the quack rather than to corroboration of the facts I stated, and

Fourthly, because I am going to conclude my paper by asking for a resolution to appoint a committee by our branch, which in conjunction with a lawyer, should take up that question and report on a detailed plan of action.

If this proposition will pass, I will feel that our time here has not been spent in vain.

The resolution passed and a committee consisting of Dr. G. Halperin and Dr. Krasnow was appointed to study the question and report at their earliest opportunity.

---

### ASTHMA\*

RICHARD H. BROWN, M. D.,  
CHICAGO

Asthma is a condition characterized by intermittent paroxysmal dyspnea and vasosecretory disturbances, accompanied by prolonged expiratory murmur, great expiratory effort and sibilant rales over both lungs.

The disease rarely comes fully developed from the start, but is preceded by attacks of slight bronchitis with a tendency to wheezing. Later the characteristic paroxysms occur, usually foreshadowed to the patient by prodromal symptoms varying greatly but apt to be the same for each individual. These prodromes may consist of a general vague discomfort, or the opposite, a feeling of buoyancy, of drowsiness or depression, of symptoms of nasal irritation with itching, sneezing or coryza, perhaps only a peculiar taste in the mouth or epigastric oppression without loss of appetite. The patient learns to appreciate his warning symptom like an epileptic aura.

The paroxysm itself may come at any time, but oftenest after midnight; frequently is timed by the clock for a certain hour. The attack begins with a suffocating feeling of constriction in the throat or chest. A short, dry cough becomes rapidly, distinctly wheezing. There is soon marked distension of the chest and the patient seeks for more air, often going to an open window. He takes some position where the shoulders and spine are fixed so that he can use every effort of the accessory muscles to assist in breathing. The diaphragm is more or less in spasm, moves

but slightly and is lower than normal. The face becomes livid and swollen. The eyes protrude and there is free discharge of nasal mucus with occasional sneezing. The cyanosis may become very great, the extremities cold and a clammy perspiration breaks out. Expiration is usually quite prolonged, even two or three times as long as inspiration and accompanied by marked wheezing with sibilant and sonorous rales which may be heard at some distance. On account of the spasm of the diaphragm the epigastrium is not retracted, or but slightly. There seems to be great difficulty for the same reason in getting the air out of the chest, and inspiration follows without a pause. On account of this prolonged breathing act, the respirations may be much less frequent than in health.

Inspection and percussion show marked signs of emphysema, the liver depressed and heart dullness reduced. Auscultation shows at first dry rales with wheezing. Later these become more moist with loud sibilant and bronchial sounds.

The ordinary attack lasts a couple of hours or more and the subsidence is marked by ability of the patient to cough up small pellets of grayish white tenacious matter somewhat resembling boiled tapioca, with a little thin mucus. The little pellets are very characteristic and consist of a denser mucus, frequently arranged in a spiral form, the asthma spirals. They contain the Charcot-Leyden crystals, small and octahedral, colorless or faintly yellowish when massed. Degenerated epithelial cells are found and leucocytes mostly eosinophiles.

Besides the typical form of asthmatic paroxysm, another is very common where there is little or no spasm of the diaphragm or consequent distension of chest; principally dyspnea, both expiratory and inspiratory, with rales and wheezing, the so-called "nervous asthma." This is called by some a different form of disease, but the difference seems only one of degree. Other attacks begin with marked sneezing and coryza with lacrymation running into the more typical attack. This form is quite characteristic of hay asthma.

As regards the pathological condition that causes these various symptoms, there has been, as yet, no very definite proof. All seem agreed that it is a neurosis, but calling a disease a neurosis does not explain it. Various theories have been

---

\*Read before the Chicago Medical Society, June 6, 1917.

advanced to account for it, the most generally accepted being that the cause is a spasm of the circular unstriated muscles in the walls of the bronchioles.

Brodie and Dixon have demonstrated that stimulation of the vagus, which is the only motor nerve supplying the bronchi, will cause the signs and symptoms of spasmodic asthma. The same stimulation has been shown by Auer and Lewis to be caused by the influence of proteid poisons when the vagi were both cut and the animal kept alive by artificial respiration. In either case the injections of atropin served to arrest the spasm.

Vasomotor turgescence of the membrane of the bronchi is considered by others to be the real cause, and many observations point strongly that way. There seems to be no reason that vasomotor congestion and spasm should not co-exist. No one who has studied the spasmodic laryngeal symptoms that accompany even mild throat irritation would be surprised at this. The frequent co-existence of vasomotor rhinitis and hay asthma is suggestive. Certain it is, that there practically always results a catarrhal discharge during the attack, the peculiar spirals are composed of dense mucus and are usually claimed not to show inflammatory products, except in case of chronic bronchitis.

Many of the later writers on this much discussed topic claim that asthma is the result of an anaphylactic attack. There is much force in their contention. Sensitization to various proteid substances, both of animal and vegetable origin, has been shown by skin inoculation, and the exhibition of such substances produces its irritant effect through some part of the respiratory tract, principally the nose. Retention or decomposition of mucous secretions in the accessory cells or behind hypertrophic turbinates, inhalation of dust or animal odors, or absorption from alveolar abscess are the commonest methods. This conception of asthma does not, in the least, invalidate the preceding theories. In fact, it distinctly tends to explain them. One of the most marked symptoms of anaphylactic shock is respiratory spasm. The classic experiments of Auer and Lewis simply show that in guinea pigs the effect of anaphylactic shock is death from spasm of the bronchial muscles. They distinctly state that a slight submucous edema is found in the bronchioles. They admit that the symptoms

in dogs are quite different from those in guinea pigs. Vasomotor disturbances are constantly met with in the human being, urticaria being usually looked upon as characteristic of such attacks. The existence of a marked proportion of eosinophiles in both asthma and urticaria is suggestive.

The treatment of such a condition as asthma, as of any other neurosis, will vary according to the individual practitioner. Almost every substance in the *materia medica* has been used and vaunted, both by profession and laity. Out of the medley a few are of considerable utility. To abort an attack probably hypodermic injections of morphin or atropin, or both, have proved the most useful. Heroin may be used instead of morphin. The inhalation of chloroform is good but dangerous. A-*perle* of amyl nitrite or valerianate inhaled may also succeed. Sedative and antispasmodic remedies are much employed and should be pushed to the point of physiological relaxation for their best effect. The commonest of these are belladonna, stramonium, tobacco, lobelia or quebracho. The fumes from these drugs with potassium nitrate can be inhaled with some benefit. The iodides seem to have the most reputation between attacks.

All medicinal substances, however, soon prove disappointing. Care in the matter of overeating, and scientific regulation of diet, with occasional free purgation, have in the practice of thoughtful men, done much more. Avoidance of dust, fresh air, change of climate and change of work all have accomplished much.

When a few years ago the cure of a case of asthma by removing polypi was reported, these patients came more and more to be sent to the rhinologist, and every conceivable operation or treatment has been tried with varying, but usually good, results. In fact, it would seem that even by the most tentative and experimental methods the nasal specialist cures or alleviates more cases of this disorder than all others combined. The removal of polypi and the drainage of ethmoid and other sinuses seem to have been the most successful methods, though operations on the septum have been of very great effect. Much attention also has been called to the writings of Francis, who claims the cure or radical relief of the vast majority of 1,066 cases by cautery of the upper anterior septum. He secures the best results



when the nose seems the most normal, and also by the very lightest cautery. Others have not been so successful and hint that suggestion may have been the real cause of his reported successes. Certainly the Francis cauteries have not prevented the necessity for more severe operating when pathological conditions were found.

The prognosis in asthma has been considered always favorable so far as life is concerned, but poor for prevention of attacks. We believe that this also can easily be changed to favorable.

The articles written on this disease are multitudinous and only one excuse can be offered by the essayist for adding ever so slightly to them. His success in the treatment of this disease has been greater than the majority claim. Empirically he has deduced a clinical theory that seems to correlate the more generally approved ideas of others and, on reading the more recent articles during the preparation of this paper, finds very substantial support from others whose minds have worked along similar channels.

Some twenty years ago the writer, being convinced through personal experience of the importance of bowel toxemia in the causation of various neuroses, was impressed by the similarity of the symptoms to those found in his hay fever patients. The same marked similarity was observed in the cases of asthma, the prodromal symptoms in particular, being identical with those of toxemic troubles. Treatment along that line served more and more to fix the idea until it became a working clinical hypothesis that the underlying neurosis of the asthmatic, like that of the hay fever patient, was largely the result of absorption from the bowel of poisons derived from the putrefaction of proteid waste. There has been, in the vast majority of cases, some nasal irritation which seemed to determine the location of the symptoms in the respiratory tract. When this nasal condition was relieved by operation or otherwise, and, along with it, the patient placed on a suitable diet with proper eliminative treatment, the relief or cure was perfectly satisfactory.

Recurrences came, it is true, but only in a few cases where the patient would not allow supplementary nasal work, or refused to submit further to dietetic rules, was there any difficulty in stopping these. It must be understood, of course, that he is now referring to true asthma, not to

the dyspnea from laryngeal paralysis, obstruction from bronchitis or lung trouble, nor that of kidney or heart disease.

Granted that the reasoning has been inductive, there are many facts to point strongly toward this causation, and observations of perhaps the greater number of the more recent writers, at least those in the English language, bear markedly in this direction.

Asthmatics belong to a class of neurotics in which a strong heredity exists. They are found more commonly in the most nervous races, as for instance the Jews. Marked idiosyncracies regarding food and drugs are found among them. Doctors are driven to distraction by unexpected action of their medicines. Parenthetically, one should remember the similarity between idiosyncrasy and anaphylaxis.

Eric Billingham Smith finds eczema a common precursor to asthma in children, and urticaria far the commonest eruption. All these characteristics are found among the victims of bowel toxemia. He found the best results from regulation of the bowels in chronic constipation and a course of rhubarb and soda. We would call attention particularly to the soda.

Most of the later writers consider asthma as a form of anaphylaxis or protein sensitization. Bernard Oettinger calls attention to a report in the *Journal A. M. A.* in 1908, that three fatal cases of anaphylactic attack from first injection of antitoxin had been in asthmatics.

Meltzer says, "An asthmatic is a person who is sensitized to a definite substance and an attack is set up whenever this substance enters the blood in any way."

Justus Matthews finds in a study of 200 cases at the Mayo clinic, that sixteen had overshadowing symptoms of heart, lung or kidney disease, 184 had the principal lesions in the nose, 58 polypi, 52 polypoid degeneration of middle turbinate, 63 suppuration in one or both antra, 12 children with tonsil and adenoid disease. He claims that sensitization may come from absorption of proteid substances, from retained and putrefying discharges in sinuses or pockets.

Goodale and Talbot both agree, after close study of their individual private cases, that asthma may be divided into, 1, inhalation anaphylaxis, whether seasonal, from pollen, etc., or perennial from dust and animal exhalation;

2, ingestion anaphylaxis: milk, eggs, shellfish, etc.; 3, autolysis of bacterial proteids from retained secretion.

R. H. Babcock claims sensitization from ethmoids, alveolar abscess or bowels.

W. J. Abbott regards asthma as an anaphylactic attack, largely of nasal origin, and considers ethmoiditis as the commonest and probably a necessary condition in its etiology, and that intestinal conditions help greatly to aggravate the condition.

Burdick and Abel claim the asthma paroxysm as an anaphylactic attack, due to protein sensitization, mostly from the bowel. They say a neurotoxin is found in every case so far examined, that skatol is quite prevalent and a high indicanuria universal. Most of the cases tested responded to egg, some to shell-fish as well as other albuminous foods, and some doubtless were sensitized to protein of pus or other confined secretion.

Eustis examined 178 cases from the dietetic standpoint and found only three in which there was not a high indicanuria, either during or after the attack, and only ten where eliminative treatment and diet for relief of bowel toxemia did not give satisfactory result. He calls attention to the discovery made by Barger and Dale while attempting to isolate an active principle of ergot. They found a base which they identified as betaimidazolylethylamin, which when injected into guinea pigs, cats and rabbits stimulated contraction of the unstriated muscle, not only of the uterus, but the bronchioles. Ackermann has described a similar base derived from the putrefaction of histidin, an amino acid formed in the peptolytic digestion of proteids. Eustis experimented with this base and found it caused not only an experimental asthma paroxysm but also urticaria. He claims to have proved that the Charcot-Leyden crystals found in the sputum of asthma are amines similar to cadaverin and putrescin, resulting from putrefaction of proteids. He suggests that the protein sensitization, which term he prefers to anaphylaxis, comes from absorption of some substance similar to betaimidazolylethylamin, if not identical, either from bowels, sinus retention of mucous secretion or alveolar abscess; that this form of poisoning can be overcome by nature's powers of resistance when in health; that he has experimentally shown that

the poison may be detoxicated in his experiments on the liver of the turkey buzzard.

It is not necessary to quote farther, except to say that all who have studied the skin reactions of asthmatic patients find that most respond to more than one proteid substance. This agrees with the clinical observations of the writer. Several of his patients showed marked idiosyncracies against different drugs. In fact, in the cases he individually treated during the attack, he had to learn by experiment their personal peculiarities before he found the agent that gave the required result. Two got relief of the spasm by morphia, but instead of causing drowsiness it produced wakefulness and exhilaration.

One very interesting case showed twice an extreme reaction to the application of capsicum plaster used by a dentist. The body, from the waist up, as well as face and head, resembled that in a severe scarlet fever with very marked swelling and burning, eyes swollen shut, rings cutting into fingers, etc. These attacks came on suddenly and subsided quickly under alkaline purgatives. This case was a confirmed asthmatic, an invalid for twenty years with paroxysms two or three nights a week, according to her story. A cautery of the turgescent septum was done with no thought except to improve nasal respiration and she had no further attacks when last seen, twelve years later, except slight trouble once for two weeks during hay fever. This, by the way, is our only case that seemed to uphold Francis' claims. This patient, having been an invalid for so many years, was very willing to make the dietetic changes prescribed, and to her co-operation in this regard, we must ascribe the brilliant recovery.

In this connection it must be said, that in a few cases, and they were but few, where the nose appeared essentially normal, the symptoms were very much of an hysterical nature. The great majority of our cases showed some decided nasal trouble, and while markedly neurotic, would not be classed as hysterical.

By far the greatest proportion of the author's cases were ethmoidal, the worst of them showing a typical chronic ethmoiditis with polypoid degeneration of the middle turbinate. One of twenty years duration showed only a middle turbinate pressing upon septum, but on operation the ethmoid cells were found full of polypi though



the removed turbinate showed no apparent degeneration. In some few cases the only treatment required was the removal of polypi from under the turbinate, thus allowing drainage. This was true only of four or five cases. In many more ethmoid operating was necessary and in the majority of these a recurrence of polyp growth brought on return of asthmatic symptoms. In all of these no difficulty was found in checking the paroxysms by cleaning out the developing polypi. While the essayist regards these as cases sensitized by sinus retention, he found in every case examined, a very high acidemia with marked indicanuria. For a number of years he has advised thorough laboratory urinalyses in such cases.

In two very pitiful asthmatic invalids where there was pansinusitis, only slight relief was obtained, as the patients discontinued treatment before all the sinuses were properly drained.

More easily treated, so far as the nose is concerned, has been a smaller group of patients where the irritation consisted of deflection of septum or hypertrophied turbinates causing pressure. Prompt stopping of the asthmatic attacks came after healing but these cases were, like the first class with the normal noses, more distinctly toxemic from bowel absorption and more difficult to control. After operation two had slight attacks when suffering from occasional "colds" but refused dietetic care as the "treatment was worse than the disease," preferring palliative treatment until recovery from the catarrhal attack.

It has seemed reasonable to the writer to consider in such cases the underlying toxemia as the real disease, and the nasal irregularities merely as incidents which served to locate the anaphylactic explosion in the respiratory tract rather than elsewhere as an urticaria, for instance.

In general, the writer's experience in treating such asthmatics, as have come to him, has been extremely satisfactory. The same can be said of hay fever. Probably these latter cases may explain in a measure why he has met this unusual success. For years he has taught his students that there has been but one serious obstacle to success in the cure of this disease, namely money. His wealthy patients found it very much more agreeable to take a pleasant trip north during the hay fever season than to regulate diet strictly,

and perhaps use high bowel flushings. The patients who could not afford to run away, stayed at home and followed directions with most gratifying results. It is not so easy to run away from asthma, but we all know how the laity has ever looked to find the pot of gold at the end of the rainbow by a "change of climate." Most of our individual patients, however, have been very faithful in following treatment. Hence, the good results reported.

It is practically only from a study of these individual cases that the writer makes his deductions. Patients referred to him by others, seen only during care of the nose and clinical cases, have served to confirm his conviction, but it is obvious that, in such, a greater proportion of failures might come without the knowledge of the operator.

In this connection, too, he wishes to state that there is no *a priori* reason that chronic bronchial retention should not act in the same way as sinus or other nasal retention of secretions, but in his practice he has not seen such.

The treatment referred to is simple. Correct all manifest nasal obstructions and drain all cases of sinusitis. Watch for recurrence of this inflammation and use appropriate treatment early. Reserve cautery for the touching up of the rather unusual hyperesthetic spots. Hypertrophies and intumescences are best treated by the knife.

Diet is regulated by the findings in thorough urinalysis. This has meant in practically every case, cutting down to the vanishing point the animal proteids, giving free amount of water and mild alkaline medicines with occasional mercurial and saline catharsis. High colonic flushings with alkaline solutions are also prescribed to hurry the treatment and always when indol and skatol are found. All forms of vegetables and fruits have been allowed but overeating has been strictly prevented if possible. Palliative drugs have been used when required at time of attack.

The writer regrets that he is unable to give detailed statistics of his cases, but full histories have only been kept for the past few years and embrace only a small proportion of the patients whom he cared for during their entire trouble. He can not quote great numbers of cases as some have. Such reports must come of necessity from institutional practice. The deductions are made from a not inconsiderable practice of twenty-

six years, during over twenty of which he had the additional advantage of conducting special clinics.

He would sum up his conclusions as follows:

1. Asthmatic paroxysms are of the nature of anaphylactic attacks.

2. The underlying cause is sensitization of the system by absorption of proteid toxins from bowels or retained secretions in nose or elsewhere.

3. The exciting cause is the inhalation or ingestion of this protein poison when the system is so sensitized.

4. Nasal irregularities may tend to focus a toxemic attack in the respiratory tract which might otherwise show in other manner.

5. Thorough treatment of nasal disease or abnormality, with scientific attention to bowel toxemia, cures or prevents the great majority of cases.

#### BIBLIOGRAPHY.

- McDonald, G.: *British Med. Jour.*, Nov. 5, 1904.  
 Auer and Lewis: *Jour. Exp. Med.*, 1910, XII.  
 Osler's *Modern Medicine*, III, 710.  
 Berkart, J. B.: *Pathology and Treatment of So-called Nervous Asthma*.  
 Meltzer: *Jour. A. M. A.*, 1910, LV, 1002.  
 Matthews, Justus: *Jour. A. M. A.*, 1912, LIX, 1107.  
 Oettinger, B.: *Med. Record*, Nov. 9, 1912.  
 Francis, A.: *British Med. Jour.*, Nov. 26, 1910.  
 Grant, Dundas: *Practitioner*, June, 1913.  
 Brodie and Dixon: *Trans. Path. Soc., London*, LIV, 38.  
 Abbott, W. J.: *Ann. Otol., Larynx and Rhin.*, 1914, XXIII, 83.  
 Babcock, R. H.: *Jour. A. M. A.*, 1915, LXIV, 2115.  
 Davies, R. C.: *Tr. Am. Therap. Soc., N. Y.*, 1915, XVI, 53.  
 Klenk, C. L.: *Interstate Med. Jour.*, St. Louis, 1915, XXII, 1209.  
 Burdick and Abel: *Rational Medicine*, p. 175.  
 Jackson, D. E.: *Jour. Lab. and Clin. Med.*, St. Louis, 1915, 126.  
 Rogers, Sir L.: *Practitioner*, Lond., 1916, XCVI, 573.  
 Eubank, W. W.: *Med. Jour., Australia*, 1916, II, 53.  
 Hughes, W. K.: *Med. Jour., Australia*, 1916, II.  
 Eustis, A.: *South. Med. Jour.*, Nashville, 1916, IX, 387.  
 Talbot, F. B.: *Boston Med. and Surg. Jour.*, 1916, CLXXV, 191.  
 Rehn, M. H.: *Arch. Int. Med.*, Chicago, 1916, XVII, 445.  
 Goodale, J. F.: *Trans. Am. Larynx As.*, May, 1916.

## GOITER, THE DIAGNOSIS AND TREATMENT

LEIGH F. WATSON, M. D.

CHICAGO.

*Diagnosis.* The diagnosis of hyperthyroidism is difficult at times, especially when there is no exophthalmos or decided enlargement of the thyroid. When these symptoms are absent, the heart and nervous system are often treated without recognizing the underlying cause of the disease. The symptoms first noticed may be slight insomnia, nervousness, and accelerated heart action, which are increased on exertion. Exophthalmos is present in only a small per cent of the cases of moderate hyperthyroidism and is not demonstrable in every case of severe toxic

goiter. When enlargement of the thyroid gland occurs at puberty, menstruation, or pregnancy, it may be physiologic and temporary; if it follows severe or prolonged emotional strain, it is more likely to be pathologic. In eighty per cent of the exophthalmic patients coming under my observation the onset was traced to an accident, sudden fright, parturition, grief, worry, climacteric or infectious diseases. Simple goiter may change into the toxic type at any time. Ninety-four per cent of all goiters occur in women.

*Clinical Observations.* In reviewing the case records of one hundred and twenty-five patients who live in western states, where the per cent of the population affected by goiter is very low, I observed that the onset of the disease is later in life, and the toxic symptoms develop more slowly, than is the case in those patients coming from sections where the disease is more prevalent. In this group of one hundred and twenty-five patients, forty per cent of the exophthalmics noticed the goiter eight years before examination, at the average age of thirty-four, and the symptoms developed at the average age of forty. Fifty per cent gave a history of acute onset two years before coming under observation, at the average age of twenty-nine. Five per cent gave a history of acute exophthalmic symptoms, several years before, when the temperature ranged from 102-4° F. daily, for two to four months. The symptoms suddenly ceased and the goiter became atoxic. Of the patients who were toxic, but had not reached the exophthalmic stage, it was noted that sixty per cent observed that they developed more marked symptoms of intoxication as the goiter became more chronic. Eighteen per cent of the toxic patients, after an average period of five years, suddenly became exophthalmic. Twenty-two per cent of the nontoxic patients have shown no tendency to become toxic. None of these had had goiter for more than three years; the average duration was seventeen months and the goiter appeared at the average age of thirty-two.

If the goiter is of the severe rapidly progressive type, the first acute exacerbation of symptoms may not occur for four to six months, when the patient is forced to her bed for perhaps a month; as the symptoms subside she is able to be up, but can not do any sort of work. The disease follows a chronic course with the involve-



ment of other organs in addition to the heart and nervous system.

*Influence of Other Lesions on the Symptoms of Goiter.* The association of thyroid and uterine disease is often observed, and has been variously estimated at fifteen to twenty-five per cent of all cases. In this group of one hundred and twenty-five patients, ovarian pain was noted in thirteen per cent of the exophthalmics and in nineteen per cent of the non-exophthalmics; dysmenorrhea occurred in thirty-eight per cent of the non-exophthalmic patients. The amount of flow and the regularity of menstruation varied with the severity of the toxic symptoms, menstruation usually being absent in the most advanced cases. The favorable influence exerted by ovarian substance in certain types of hyperthyroidism indicates the close relationship existing between the thyroid and ovary.

The predominance of neurasthenic symptoms with low blood pressure and perhaps bronzing of the skin, point strongly to deficiency of the suprarenals.

*Treatment.* Too frequently the physician advises the patient with beginning hyperthyroidism, that the goiter will disappear of its own accord. It is true that sometimes physiologic goiter will disappear if left alone; however, if it does not disappear in a few weeks, or if it recurs after the removal of the exciting cause, the probability of its permanent subsidence without treatment is remote. It is a mistake to neglect the small beginning goiter, because it is at this early stage that the disease responds most easily to treatment.

Usually the hyperthyroid patient is not regarded as a sick person. Because her symptoms may not be severe enough to compel her to stay in bed, the physician is liable to be lax in insisting on close medical supervision. Surgeons and internists agree that any procedure for the treatment of hyperthyroidism must be based upon a period of rest with medical, dietetic, and hygienic measures suited to the needs of the individual case. The patient will usually do best away from home, removed entirely from surroundings suggesting mental and physical exertion. Inquiry will often disclose some particular factor of work or worry that has contributed to the symptoms or perhaps caused the disease, and which should be corrected as far as possible. Sympathetic friends and relatives should be excluded, thus

giving the patient an opportunity for repose as complete as can be in a cheerful atmosphere.

*Quinin and Urea Injections.* About four years ago I observed the effect of a concentrated solution of quinin and urea which I injected into an angioma of the tongue, that had been repeatedly cauterized with carbon dioxide snow without reducing its size or vascularity. Injections of a concentrated solution caused the tumor to disappear completely; the tongue assumed its normal size and color and there has been no return of the condition since. Babcock has recently reported several of these cases successfully treated by this method.

Shortly after treating the angioma, I used the quinin and urea injection in a severe case of toxic exophthalmic goiter. The patient was too ill to stand even the slight operation involved in ligating the superior thyroid arteries; the improvement following the injection was more decided than I have ever seen following ligation.

The use of injections of iodine, carbolic acid, alcohol, arsenic, iodoform and chronic acid are to be condemned because of their poisonous and corrosive properties and the liability of producing a thrombus if accidentally injected into the blood stream.

In selected cases I believe hyperthyroidism can be relieved by means of concentrated solutions of quinin and urea injected into the thyroid. Preliminary injections into the gland of a few minims of sterile salt solution, followed by injections of sterile water, are recommended to raise the patient's threshold to stimuli, thereby lessening the danger of acute hyperthyroidism which might follow the slight pain of the first quinin and urea injections. As soon as no hyperthyroidal reaction follows the water injections, their usefulness is at an end. The necessity of preventing the slight pain from any injection, by means of local anesthesia, can not be too strongly emphasized.

The injection is not suited to all types of goiter and unless used discriminately, it will be disappointing if it is not disastrous. The procedure is one that is surrounded by certain dangers, immediate and remote. One inexperienced is liable to puncture the trachea or one of the large blood vessels, or to make the injection into the soft tissues of the neck. Injections that are too extensive will produce the same symptoms of myx-

dema that follows the removal of too much thyroid by operation. There is always the danger of provoking an acute attack of hyperthyroidism. The toxic patient should be watched carefully and at the first sign of an impending exacerbation treatment should be stopped; a hypodermic of morphin and atropin given, ice bags applied over the thyroid and heart and the room darkened.

#### CONCLUSIONS

1. The importance of early diagnosis and treatment of goiter are to be emphasized if the best results are to be secured.

2. Goiter occurs at an earlier stage, and the symptoms of intoxication are more severe in goiter districts, than in localities in the western states, where the disease affects only a small per cent of the population. In sections where it is infrequent, the exophthalmic type seems to develop more often.

3. In a group of one hundred and twenty-five cases, I believed that the quinin and urea injections were not indicated in twenty-five of the number; the method being used only in the one hundred cases with the following results: The symptoms were relieved in eighty-five per cent of the exophthalmic, and in eighty-four per cent of the toxic non-exophthalmic patients. Fifteen per cent of the exophthalmic patients were improved and ten per cent of the non-exophthalmics were benefited. In eighty per cent of the exophthalmic patients the goiter entirely disappeared within an average period of five months; in fifteen per cent the tumor was reduced in size and in five per cent there was no change. The tumor disappeared in seventy-five per cent of the non-exophthalmic patients; it was reduced in twelve per cent, and in thirteen per cent there was no change. These patients have been under observation for two to four years and there has been no recurrence of goiter or symptoms in any patient who was once cured.

4. The number of patients cured is highest in the group of those who came for treatment early in the disease; the benefit received by those who came later, being in proportion to the degree of damage done the circulatory and nervous systems. If the best results are to be secured, hyperthyroidal patients must have at least a year of mental and physical rest after treatment.

30 North Michigan avenue.

## THE INDICATIONS FOR OPERATION IN ACUTE MASTOID DISEASE.\*

G. HENRY MUNDT, M. D.,

CHICAGO

To obviate misinterpretation of the scope of this paper I wish to define the field I make an effort to cover.

No effort will be made—

1. To advise any operative technic.
2. To discuss the diagnosis and indications of the complications of acute mastoiditis; especially does this apply to the intracranial complications.

Rather, an effort will be made to assist in an intelligent interpretation of the various symptoms and signs (from the standpoint of operative interference) of acute mastoiditis.

In the title the word operation is intended to cover only attack upon the mastoid antrum and cells, and refers in no way to paracentesis membrana tympani, as no one would consider mastoidectomy unless paracentesis had been done, unless the case showed symptoms which would point to the necessity of immediate mastoid operation.

Although the consideration of treatment in a paper on indications for operation may seem irrelevant, it seems best that I first outline in a very brief way the important principles of treatment which should be carried out (unless the case be one in extremis) before mastoidectomy is seriously considered.

1. The patient should be put at absolute rest, preferably in bed.
2. Diet restricted.
3. Thorough catharsis secured.
4. The membrana tympani should be thoroughly incised to get the freest possible drainage from the tympanic vault, and if it becomes blocked drainage should be re-established without delay (repeated incisions being at times necessary). It is my opinion that this should (where practicable) be done under a general anesthetic, preferably nitrous oxide.

No packing of any kind should be inserted into the external auditory canal as it may impede drainage; however a mass of cotton wool may be loosely placed in the concha to absorb the pus.

This is the most important single element in

\*Read at meeting of the Englewood Branch, Chicago Medical Society, November 6, 1917.



the nonoperative treatment of mastoiditis, and should be given the most careful attention, remembering that probably no case has been well handled unless the membrana tympani has been opened.

5. The ear should be thoroughly irrigated frequently (every hour or two) with a solution of boric, lysol, chinosal or some other mild antiseptic, being certain to instruct with great care the person in charge of the patient that the irrigating can or bag be elevated not to exceed a foot above the head (to obviate extreme pressure).

A solution of the type of 10 per cent phenol in glycerine in my opinion has very little virtue, however it is generally accepted as of use so one may as well prescribe it, instructing that it be warmed and dropped in the ear following the flush.

6. Early in the process before engorgement becomes well established the application of cold (ice bag) seems to be of value, however it is my opinion (and generally accepted) that after the inflammatory process becomes well established cold may be positively detrimental.

Heat now (after establishment of inflammation) becomes of value and may be used in the form a hot water bottle, hot bag of salt or hops, or an electric pad; however moist heat in the form of a poultice should be tabooed.

In using heat care should be exercised to see that the soft tissue is not burned because if it is one may be greatly confused in arriving at a correct conclusion regarding soft tissue inflammation as well as the differentiation between soft tissue and bone tenderness.

The use of leeches, scarification, blistering and the like is in my opinion of doubtful value as a therapeutic measure, and they may make the case difficult to interpret very much the same as the use of excessive heat.

7. Internally some of the salicylic acid derivatives are of value.

The use of opium derivatives is to be tabooed because they may mask the symptoms of very important complications, also their continued use may put the patient in an unsatisfactory condition for anesthesia because of the nervous irritability they may produce.

In considering the advisability of operation in acute mastoiditis one had better err on the side

of radicalism because the operation may in competent hands be considered a relatively simple procedure, while failure to operate may be fraught with the most serious consequences, as Todd says he has never regretted doing a simple mastoid but that he always has a haunting fear when a patient who has had an involvement of the mastoid recovers without operation.

In my discussion I am presupposing that the diagnosis of mastoiditis is correct, and has been positively differentiated from furunculosis of the external auditory meatus, and acute lymphangitis of the neck.

To expedite matters I will discuss the chief clinical points under nine subheads.

1. *Previous Local and General Conditions.* The first local condition—The advent of an acute mastoid involvement in a patient with an old purulent otorrhea is probably one of the most positive indications for immediate mastoid operation.

Another local condition—Nearly all mastoid disease is preceded by involvement of the middle ear proper, so one will in nearly every case get a history and find on examination involvement of the tympanum; this need not however be true as anatomically there is such a thing as a closed mastoid (i. e. no connection between antrum and middle ear or so small that the congestion of the mucosa closes it), and nearly every aural surgeon has opened mastoids for patients who have practically normal (at least no acute involvement) drum membranes.

Another local—Given a patient who has had an acute otitis media which has not cleared up under a good course of local and general treatment, I think we have a patient for operation. Operation in this kind of a case is a two-edged sword inasmuch as it will prevent the condition from becoming chronic when a much more extensive and serious operation might have to be performed, and also save the patient's life as well as preserve the integrity of his organ of hearing.

The first general condition—As is very generally recognized early operation is indicated if the condition is a concomitant or a sequela of one of the acute exanthematous diseases; particularly is this true with scarlet fever and measles.

Another general condition—Where we have good cause to think that the infection may be

endogenous, little time should be wasted on any other line of treatment, especially is this true if there be little involvement of the middle ear proper. This condition is especially apt (I do not wish to be understood as saying often) to develop in typhoid or some other septicemia.

2. *Roentgen Examination.* The value of x-ray examination in acute mastoiditis I do not consider nearly as important as in the chronic condition; however by comparison of the two mastoids much information may at times be gained, at least if the antrum and cells are full of pus it can be seen. Usually it is too early in the disease to see any necrosis; also anatomical variations from the normal may be seen.

It is my opinion that from a purely diagnostic point of view especially regarding arriving at a conclusion about the necessity of operation that the x-ray holds a very small place in acute mastoiditis.

3. *Blood Examination.* A—Blood count. A leucocytosis is probably a constant concomitant of acute mastoiditis, if the patient has any resistance at all; however, a leucocytosis in itself is of no importance to us in this connection.

It is generally conceded that in an acute otitis media with a considerable leucocytosis (18,000-30,000) with a high percentage of polynuclears that it is probable that the blood stream (via sinus) is being invaded and calls for immediate operation.

B—Blood cultures. The subject of bacteremia should probably receive no attention here as it is hardly pertinent.

Bacteremia today is not considered so infrequent as it was a few years ago, probably because of improved technic. I think there would be no disagreement with me on the point that if bacteremia is found to exist and all other points of possible infection have been excluded we would have a very positive indication for operation as it would probably foretell a sinus thrombosis.

4. *Time Element.* This is hardly a satisfactory basis on which to arrive at a conclusion regarding operation, because as we are all well aware more damage may be done in an hour in some cases than in days in others; it probably, however, gives us a fair working basis.

Given a case of uncomplicated acute mastoiditis in which there has been thorough general

and local treatment for twenty-four hours, if there is no abatement in the symptoms but no increase in severity one should resatisfy himself that drainage cannot be improved and keep the patient under observation. On the contrary if the symptoms have continued to increase in severity or particularly something points to an impending complication an immediate operation should be done.

How long one should wait after the establishment of an acute mastoid before advising operation will not be generally agreed upon. The answers from a number of otologists to a questionnaire sent out by Large varied (where direct answer was made) from two to six weeks. Pierce says: "In the ordinary case it requires three weeks for decalcification to occur in the osseous structure of the pneumatic cells; up to this time (and possibly after) recovery is possible." He says also that if an abundant discharge is present at this time the indications for operation are at hand. It seems to me that this time limit is sufficiently conservative, but if the patient is watched carefully the danger is very slight. However, one should always be ready to operate instantaneously if the patient becomes worse.

One more element must be mentioned here notwithstanding that it was called to your attention above and that is the case of acute otitis media where the acute symptoms have abated but the discharge continues, under good treatment; here the mastoid should be opened to preserve the integrity of the ear as well as possibly life itself.

5. *Pain and Tenderness.* Pain would be a rather poor guide to advising operation in most cases, but given a case with perfectly free drainage through the external auditory meatus with no abatement of pain the mastoid should be opened.

Also, if after the discharge stops pain continues operation is indicated.

Extensive tenderness of the mastoid which is not relieved by drainage, or continues after otorrhea ceases is an indication.

One must put very little confidence in tenderness as a guide to the severity of mastoid involvement (this also applies to pain, but not quite so much) as it may be very marked where the cortex is thin even though the involvement be very slight, while with a sclerosed mastoid or with a



very thick cortex even with extensive involvement there may be little or no tenderness.

6. *Deafness.* This is a factor which is given very little attention, however Charles J. Heath of London lays much stress upon it. He argues that the integrity of the ear as the organ of hearing is all important and that when the hearing becomes markedly involved there is great danger that it will not clear up unless the infection is taken care of at once, also he considers simple opening of the mastoid so simple a procedure and recovery is so rapid that he lays much stress upon this point as calling for operation.

The above view is not acceptable to most American otologists.

7. *Examination of the Ear and Mastoid Region.* On inspection of the drum membrane if one is satisfied that there is very free drainage (which cannot be improved) with no abatement or an increase in signs and symptoms the operation should be done.

Bulging or sagging of the posterior superior wall of the external auditory meatus in close proximity to the membrana tympani, which is due to involvement of the cells below and anterior to the mastoid antrum (cells of Kirchner) is universally conceded to demonstrate the necessity of opening the mastoid.

Redness and swelling over the mastoid region is a rather frequent finding, especially is this true in children, the presence of either in an adult probably calls for an operation; in a child it may subside after drainage but should cause one to be on his guard. Once a mastoid in an adult has been sufficiently involved to cause these symptoms I think it is very doubtful if complete resolution can ever take place, and if this be true and we are not ultraconservative we will probably advise operation.

The development of a subperiosteal abscess which is rather frequent in children especially in infants should bespeak the need of opening the mastoid, and in making this point I am well aware that occasionally a big subperiosteal abscess will drain out through the middle ear and clear up but the danger is too great to take a chance. Kindly pardon digression from the exact subject in hand long enough for me to say that I do not consider a simple incision (Wilde's) down to the bone as sufficient in this type of case.

Extension of infection (pus) into the glands

of the neck or drainage through the tip of the mastoid under the sternomastoid muscle (Bezold abscess) demands operation.

8. *Aural Discharge.* It must be remembered as I have indicated before that we may have all of the symptoms of mastoiditis (and really have it) with no involvement of the middle ear proper, when no discharge will be found. In this case the infection is probably blood borne or else there may have been advent of infection from the tympanum and it caused enough swelling to cut off the connection; in other words, it may have been a closed mastoid in which there was no otorrhea or other involvement of the middle ear; this type of mastoid should be opened when diagnosed.

Sudden stoppage or marked diminution of the drainage with no abatement or possibly increase of symptoms calls for operation. (This was also considered above).

Another exceedingly important factor which must always be kept in mind is the presence of an enormous discharge (practically runs out of the ear); more than can be accounted for as coming from the middle ear and mastoid is in my opinion one of the most positive indications for operation.

If an ear continues to discharge (under good treatment) for many weeks after an acute otitis media, it demonstrates necrosis beyond the sphere of treatment and demands operation.

Bacteriologically we have a very valuable basis for opinion. The presence of streptococci (especially capsulated) should call for the most careful watching as their presence seems to forbode complications and one should be doubly quick to advise operation if the case does not progress in a very kindly way.

9. *General Symptoms.* In a patient in whom the general prostration seems out of all proportion to the severity of the local disease operation should at least be very seriously considered.

A sudden rise of temperature, especially where drainage cannot be improved, demands operation.

I wish to mention several symptoms which usually bespeak some intracranial complication and demand our most careful attention, destroyed audition, vertigo, nystagmus, facial paralysis, convulsions, severe rigors, or sharp rise or fall of temperature.

In conclusion, I want to impress that the error

in judgment had better be one of commission than of omission because as Large says, "Early opening of the mastoid antrum prevents the case from becoming chronic, so the simple operation prevents the radical."

25 E. Washington street.

### INTESTINAL STASIS\*

GEORGE B. KELSO, M. D.

BLOOMINGTON, ILL.

Intestinal stasis is a perversion of the whole digestive tract, the exact cause of which is not well established. Many theories are advanced as to the order in which this condition is developed. The symptoms are nervous, mental and physical. Many other diseases may follow or be the cause of it. It may exist in connection with ptosis of the stomach and colon, abnormal conditions of the ileocecal valve, obstruction from bands, membranes, kinks or growths. Yet any or all of these conditions may exist without having intestinal stasis.

My opinion, based on a limited experience, has impressed me with certain points in the causation of the trouble and the method of overcoming it. The picture is very striking in extreme cases. All the symptoms stand out so prominently that the physician ought seldom to overlook the condition; the sallow, ashy pallor of the skin, the sunken, listless eyes, the nervous irritability, the flabby muscles, the general weakness, loss of energy, loss of interest, loss of flesh, mental weakness and a multitude of aches and pains give a general down and out appearance. In a case like this where organic disease of the vital organs is eliminated, the picture is complete of intestinal stasis.

It is absurd to say that Lane's kink, Jackson's membrane, or any other physical tricks of the intestines, always cause stasis. Every surgeon who does abdominal surgery has found that every kind of a kink, membrane and twist may exist without these symptoms.

At one of the recent meetings of the Surgical Congress a prominent surgeon of Chicago, spent thirty minutes throwing x-ray pictures on the screen of every conceivable, abnormal, distorted and unusual position and condition of the digestive tract and boasted with apparent satisfaction

that none of these cases had intestinal stasis or even had symptoms of ill health. This was purely a negative presentation.

Anyone can show as I have done that intestinal stasis does exist with these abnormal physical conditions in some individuals, but it does not always follow. This brings up the theory of stasis.

From experience, observation and study, I believe that incompetence of the ileocecal valve is the most frequent cause of intestinal stasis. Dr. Kellogg in his operative work for restoring the valve and Dr. Case in his x-ray work before and after, with reports of these cases, give very satisfactory evidence of the truth of the above opinion.

The ileocecal valve is constructed by invagination of the ileum into the cecum and when normal is supposed to be air tight and water tight. The object of this construction is to prevent the reflux of waste material laden with microorganisms or toxins, as the case may be, from the colon to the ileum, where they are more quickly and easily absorbed. How absorption takes the place, and the physical laws governing absorption, and whether the poisons are bacteria or their products, I will not discuss.

I will mention an interesting case which is typical of intestinal stasis and the operation for making the ileocecal valve competent. An unmarried woman about thirty years of age gave a typical history of intestinal stasis with the emaciation, sallow skin, general debility, loss of nervous energy, nervousness, sleeplessness, loss of appetite and constipation. The x-ray showed some ptosis but not extreme. With all these symptoms she was in a miserable condition, as she so expressed it. I did the Kellogg operation for making the valve competent. On examination the contents of the cecum could easily be expressed into the ileum. After completing the operation this could not be done. This patient made an uneventful immediate recovery. In less than three months she regained her flesh and her healthy look and good complexion and was able to do anything she wished. She was apparently well and has remained so.

Prolapse of the stomach and colon in some instances undoubtedly gives rise to all the symptoms of intestinal stasis. As a rule other than surgical methods should be first tried; yet I have, in a few instances, operated previous to treat-

\*Read before McLean County Medical Society, June 12, 1917.



ment, feeling that time would be wasted if the stomach and colon were not replaced, the prolapse being so extreme. Gastroenterostomy in these extreme cases should never be performed.

I have done the Beyea operation of plicating the lesser omentum or the gastrohepatic and gastrophrenic ligaments; also the Coffee operation which consists of stitching or tucking up the gastrocolic omentum and the greater omentum to the abdominal wall, forming a kind of a hammock to support the stomach. I have also done the Rovsing operation of stitching the stomach to the abdominal wall with three parallel, heavy catgut sutures, bringing the sutures up through the abdominal wall and back through the aponeurosis, tying over the incision beneath the fat. This is a modification which I do instead of using silk and bringing the stitches through the entire abdominal wall, tying on the outside over a protective dressing and removing the stitches in four weeks.

I have also done the combined Coffee and Rovsing operations. The results of these operations are satisfactory if you can keep the patient in bed for a time. Afterwards putting them on a milk diet and give them the postural treatment. This consists of increasing the milk from one quart to four, five or even six quarts a day with no meals to begin with; elevating the foot of the bed a part of the day and placing the patient on the right side with the hips elevated a part of the time. A system of exercises for improving all the muscular tissue should be adopted and continued.

The operations of ileocolostomy, ileosigmoidostomy and colectomy, in my opinion, are still in the experimental stage. The immediate results are very often good, but later a large number relapse, and the second condition is worse than the first.

An explanation of these results is obtained by studying the function of the large and small bowel. It is agreed that the small intestine is the great absorbing part of the digestive tract. The stomach absorbs little, also the colon, particularly the transverse and descending portion. The peristalsis of the small bowel forces the contents into the cecum, the ileocecal valve if normal prevents its return. There is, however, a reverse peristalsis in the colon which holds the contents of the ascending colon in the cecum until the principal part of the liquid is taken up. When

the valve is incompetent, as I have previously said, the putrifying contents of the colon are forced back into the ileum, where more rapid absorption takes place and a resultant intestinal toxemia.

Recognizing these physiological features of function, we can readily see that by short circuiting the ileum to the colon or sigmoid or removing the colon, the contents of the small bowel are readily passed on if the tonicity and peristalsis of the small bowel are normal. Absorption does not take place and the patient is better, but after a while the ileum begins to dilate because there is no valve to prevent the return of the contents of the colon into it, the ileum, therefore, becomes a dilated reservoir for the absorption of toxins and bacteria and the patient relapses into the old condition. In my opinion, these operations of short circuiting and resecting the colon will not be a permanent success until some sort of a valve is constructed at the artificial entrance of the ileum into the colon.

A number of years ago, I heard Mr. Lane give some of his first talks on this subject. Since then I have seen him operate many times and have followed up his patients for two or three weeks and have heard him discourse on the marvelous results obtained.

But Mr. Lane makes me think of the exponents of orificial surgery. There is hardly a disease in the whole category of diseases that these men have not cured by operating on the rectum. Their work on the rectum is worth investigating by anyone who has not done so, as they do the work, not alone for the local condition but for the cure of general diseases. I have seen some remarkable results from this rectal work.

So with Mr. Lane and his operations on the colon; insanity, arthritis, goiter and consumption are all cured by Mr. Lane with his colon surgery. These men are great pioneers in their line, their enthusiasm carries them over difficult places and partly obscures their vision of the end results. They are great workers blazing the way for the rest of us, but followers must exercise judgment in attempting to follow their path.

I do not doubt that some of the most intractable diseases are benefited and a few cured upon the theory of the bacterial origin of these diseases, but to say that all cases of goiter and

(Continued on Page 366)

# ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society, under the direction of the Publication Committee of the Council.

## GENERAL OFFICERS, 1917-18

PRESIDENT.....E. B. COOLLEY, Danville  
 PRESIDENT-ELECT.....E. W. FIEGENBAUM, Edwardsville  
 FIRST VICE-PRESIDENT.....E. P. SLOAN, Bloomington  
 SECOND VICE-PRESIDENT.....SADIE BAY ADAIR, Chicago  
 TREASURER.....A. J. MARKLEY, Belvidere  
 SECRETARY.....W. H. GILMORE, Mt. Vernon  
 (Ex-officio Clerk of the Council)

## THE COUNCIL

District 1—EMIL WINDMUELLER, Woodstock.  
 District 2—EDWIN S. GILLESPIE, Wenona.  
 District 3—CLYDE D. PENCE, Chicago.  
 District 4—C. S. NELSON, Springfield.  
 District 5—C. D. CENTER, Quincy.  
 District 6—C. F. BURKHARDT, Effingham.  
 District 7—C. E. PRICE, Robinson.  
 District 8—FRANK C. SIBLEY, Carmi.  
 CLYDE D. PENCE, *Chairman*, 3338 Ogden Avenue.

Send original articles and all communications relating to advertisements and mailing list to Dr. Clyde D. Pence, Editor, 3338 Ogden Avenue.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items to Dr. Henry G. Ohls, *Managing Editor*, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

## MEDICO-LEGAL COMMITTEE

ANDY HALL.....Mt. Vernon  
 WILLIAM O. KROHN.....Chicago  
 GEORGE STACY.....Jacksonville  
 D. R. MACMARTIN.....Chicago  
 C. B. KING, *Chairman*.....8938 Jackson Blvd., Chicago  
 THOMAS D. CANTRELL, *Secretary*.....Bloomington

## GENERAL COUNSEL

ROBERT J. FOLONIE.....39 S. La Salle Street, Chicago

State society will pay no bills for legal services except those contracted by the committee. Notify the Chairman at once. Don't employ attorneys.

NOVEMBER, 1917

## Editorials

### CONSERVATION OF SURGICAL SUPPLIES

This is a time of conservation in nearly all material necessary to human welfare. We have seen a great deal written concerning the conservation of wheat, meat, sugar and other necessary commodities, but little concerning the conservation of surgical supplies.

The United States furnishes a large portion of the world's cotton during normal times. The demand for absorbent cotton and gauze will be enormous for the next few years. The extra demand for other cotton goods will be much larger. The use of bandage material, absorbent cotton and gauze will be called for in large quantities. Such goods may be kept indefinitely. For many years the cost of these materials has been so low that it has led to extravagance in their use. There

is scarcely a physician who does not like to be generous with his dressings. A very large per cent. of dressings is destroyed after being used once—very much of which may be used again.

Catgut is used extravagantly in nearly every hospital. Alcohol is also used in a wasteful manner in many institutions. Ether is too frequently selected where local anesthesia could be used. It is probably safe to say that more iodine is wasted than is actually used.

All of these commodities will be needed at home, and the demand by the allied armies will be great. This means that we should begin conservation before the supply is exhausted. It is surprising how little gauze, catgut, iodine, etc., it is necessary to use if those using them are careful, and it is the duty of everyone at this time to save, to be economical with those things which may be needed by our armies.

### THE BANQUET TO DOCTOR BILLINGS.

The Physicians' Club of Chicago surpassed itself in its testimonial banquet to Dr. Frank Billings at the Auditorium on the evening of November 1. Always sure of a capacity audience when he has a message for the medical profession of the State or Nation, his return from Russia as head of the American Red Cross Mission was an occasion which appealed to his friends and admirers from near and far. The great resources of the Auditorium were fully taxed to accommodate the throng of seven hundred and seventy-five, including the wives of many physicians, that poured into the banquet halls.

Dr. A. M. Corwin presided in his usual felicitous form and Dr. A. Augustus O'Neill, as toastmaster, maintained his reputation as "silver tongued" orator.

Governor Lowden gracefully admitted that Dr. Billings has for years laid down the law (medically) to the Governor. On behalf of the Physicians' Club he presented a loving cup to Dr. Billings. He expressed the hope that there will go with the cup "all the blessings that he has earned for Chicago, the country and the world," at the same time declaring the Red Cross Mission to Russia "one of the most notable, successful and far-reaching diplomatic missions in the world."

Dr. Billings' address was reassuring as to the ultimate position of Russia in the war, though he



did not fail to describe the political disturbances that have at times played havoc with the plans of the military leaders. "The real hope of Russia is in the character of its people. They are orderly, good natured, good hearted, industrious, and the most wonderful technicians the world has ever known. There is less disorder since the early days of the revolution than there is in America today."

The Red Cross supplies taken by the commission were received with tears and were probably the first given to Russia by any of the Allies. Dr. Billings paid tribute to the American representatives in Russia, to Kerensky, the premier, and to the sanitary and medical departments of the Russian army.

Both the Governor and Dr. Billings received ovations when they entered the banquet room, the orchestra playing "Illinois" as the Governor appeared.

Consul-General Antoine Voikoff replied to Dr. Billings, thanking him in the name of Russia. "The government of Russia has always been the friend of the government of America, but now that we know each other the Russian people have become the friends of the American people."

Mr. Marquis Eaton, chairman of the Chicago chapter, American Red Cross, made a brief report of the enormous quantity of supplies being forwarded from his district representing the work of an army of women and millions of dollars in value.

Dr. Bevan, president of the American Medical Association, spoke of Dr. Billings' value to the medical profession of the city, state and world, as an "asset," and nominated him as U. S. Senator.

Dr. William E. Quine added his encomiums and referred wittily to teaching Billings *matéria medica*, fearing that he had forgotten much of his instruction. As a teacher of medical teachers he placed Dr. Billings in a class without equal.

The directors of the Physicians' Club, and especially Dr. Corwin, the chairman, and Dr. V. D. Lespinasse, the secretary, deserve the thanks of the medical profession for conceiving the plan of the banquet and carrying it to a brilliant success in record time.

## CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

The above named title was adopted at the eighth annual session of the Clinical Surgeons of North America, held in Chicago, Oct. 22-26. Resolutions were also adopted against the practice of splitting fees. At the session of Monday evening, Oct. 22, Dr. A. J. Ochsner, chairman committee of arrangements, welcomed the members and complimented Surgeon General Gorgas and Dr. Franklin Martin for their efforts in organizing the medical profession for military service.

Honorable Josephus Daniels, secretary of the navy, thanked the physicians who are enlisting to prevent disease, to bind up the wounds of the military forces and restore them to self-supporting status. Like the officers of the destroyers sent to England, the physician answers the call to service: "We are ready now." He described the venereal peril as deadly and demanded heroic treatment.

Surgeon General W. C. Gorgas, U. S. Army, thanked the association for the great help it had furnished his department and said the medical profession has responded as no other profession or class.

Col. T. H. Goodwin, representing the Director General of the British Army Medical Service, referred to the comradeship of British and American sailors and the great help already given the allies by American physicians and nurses at the front.

Col. Sir Berkeley Moynihan, whose ancestors for ten generations have been in the service of the British government, said that one-third of all the medical men in the United Kingdom have already enlisted in the service of the British army. He referred to the military hospital center at Leeds which supplies 6,300 beds where the normal civilian hospitals had only about 500.

He gave credit to both American and British men for discoveries that have practically abolished typhoid fever since the Boer War. And he referred to the study of bilharziosis infestation in Africa which promised an early end to the scourge. Graphically he described the "thin British line" that after days of bombardment withstood the Prussian guard assault in November, 1914. "And that was all that stood at that moment between civilization and disaster to the world."

Surgeon-General W. C. Braisted, U. S. Navy, referred to the work of the National Board of Medical Examiners which will continue during the war to hold more frequent examinations, especially of internes at the camps under the medical department of the army.

Clinics at all the city hospitals occupied the members daily and evening sessions were held in the Gold Room of the Congress Hotel. There was also a special meeting with the Chicago Medical Society.

Tuesday evening, Oct. 23, there was a symposium on "Sanitation and "Sepsis" by Surgeon Generals Gorgas and Braisted and Colonels Munson and Russell. An address on "Gunshot Wounds and Their Treatment" was given by Sir Berkeley Moynihan and discussed by Major Crile.

Wednesday evening, Oct. 24, President John G. Clark gave an address on "The Use of Radium in Surgery." A symposium on military surgery and specialties included:

General Surgery—Major Chas. H. Mayo, Rochester.

Head Surgery—Major W. R. Parker, Detroit.

Brain Surgery—Captain Chas. Bagley, Jr., Baltimore.

Ophthalmic Surgery—Major Jas. Bordley, Jr., Baltimore.

Surgery of the Ear, Nose and Throat—C. W. Richardson, M. D., Washington.

Oral Surgery—Major Vilray P. Blair, St. Louis.

Orthopedic Surgery—Major E. G. Brackett, Boston.

#### *Thursday Evening, October 25*

Surgery of the Spinal Cord—C. M. Frazier, M. D., Philadelphia.

Discussed by Allen B. Kanavel, M. D.

Surgery of the Stomach—Wm. J. Mayo, M. D., Rochester, Minn.

Discussed by A. J. Ochsner, M. D., and L. L. McArthur, M. D.

War Surgery of the Lungs and Pleura—Sir Berkeley Moynihan, Leeds.

### THE MARYLAND PLAN

A request is made by a member that we publish something relative to the Maryland Plan. The Maryland Plan refers to methods of caring for the practices of those physicians called to army service.

At the annual meeting of the State Society, held in Bloomington last May, the following resolution was passed and was published in the June number of the JOURNAL.

WHEREAS, A great crisis now exists in America, and many physicians are being called to the service of their country; therefore, be it

*Resolved*, That the neighboring physicians care for the patients of such absent physicians, returning to him or his family 50 per cent. of the money received therefor, and return such patients to the physician upon his return.

The following is the plan as outlined by the Baltimore Society:

### PUNISHING PATRIOTISM.

#### A SUGGESTED METHOD OF MEETING THIS EVIL.

Undoubtedly in the past civilian doctors who have been patriotic, and who have served their country in the army or navy, have been in a measure punished for such service by finding their practice dissipated and gone on their return home. The knowledge of this has naturally acted in preventing many a physician entering the Officers' Reserve Corps of U. S. at this time.

To meet this situation the committee proposes to have offered the following resolutions at the annual meetings of the State Societies:

(1) "Resolved, that the (name of state society) recognizes the patriotism of those members of the medical profession resident in ..... who volunteer for the service of the U. S. Government, and in appreciation of this we recommend that should these members of the profession be called into active service the doctors who attend their patients should turn over one-third of the fees collected from such patients to the physician in active service or to his family."

(2) "Resolved, that the secretary of the society shall have prepared letter-blanks according to the form attached, to a number sufficient to supply those physicians who are called into active service, with a sufficient number, so that they can send a filled-out form-letter to each patient or physician referring a patient, a carbon copy going to the doctor who has agreed to look after the physician's practice, and a second carbon copy to be sent to the secretary of the State Society.

The Secretary of the State Society is instructed to file the carbon copies received by him, and on notification by a physician that he has terminated his service with the Government and has resumed his practice, the secretary of the State Society shall then send out to each of the patients of this physician and doctors who have referred patients whose names and addresses he has received in the filed letters, a letter stating that the physician has resumed the practice of medicine, and requesting the patient and the physician in the name of the society to recognize the physician's patriotism by summoning him should he be in need of medical attention.

(3) "The secretary of the State Society is further instructed to have printed and sent to each member of the profession resident and licensed in the state the card entitled "Agreement," and on return of such signed card to him to file it."

This method is the only one which we have been able to devise which can in any way meet the situation that confronts the doctor who is patriotic, and who is penalized for his patriotism by the loss of his practice. By this method the profession at large is "put upon its honor," the patients of the physician are urged to retain his services, and this urging is done, not in the doctor's name, but in the name of the profession and as a patriotic duty.

It is further recommended by the committee that after three notices have been sent, at intervals of one



month, to each physician, a list of those doctors accepting such agreement shall be published in State Journal or otherwise.

“AGREEMENT.”

I agree to abide by resolution adopted in relation to fees for attendance on patients of doctors ordered into active service for the Government, and to keep such books as will readily show collection of such fees. I further agree to ask every patient whom I have not previously treated the name of his usual or last medical attendant and if such doctor is in the active service of his Government to turn over monthly or quarterly to such physician, or his family, if he so directs, one-third of the fees collected by me from this patient.

I further agree that when patients are referred to me by a physician or person who has not heretofore referred patients to me, to find out from such physician or person to whom, in the immediate past, they have usually referred their patients requiring the special services I can render, and if such physician is in the active service of his country, to turn over to him one-third of the fee collected from such patient. This paragraph shall likewise apply to consultations.

I further agree not to attend any patients referred to above, for a period of one year following the resumption of active practice by the physician who has been in active service.

In the remote chance of misunderstandings or disagreements arising under this resolution, I agree to submit the facts to the Board of Censors of the County Society and abide by their decision.

(signed).....

Date.....

After signing please mail this to Secretary of State Society.

Dr. ....  
Address.....

PROPOSED FORM LETTER.

(Regular Letter-Head of State Society.)

M.....  
Street.....  
Post Office.....  
Dear.....

As a member of the Reserve Corps of the United States Army, I have been ordered into active service by the Government, and on that account I am writing to you of this fact, so that, in case of illness, you may summon Dr. .... In my absence Dr. .... of ....., Telephone No. ...., has kindly consented to attend my patients and I can heartily recommend him.

Sincerely,  
.....

Resolution adopted by (Name of State Society):

“Resolved that the (Name of State Society) recognizes the patriotism of those members of the medical profession resident in ....., who volunteer for the service of the U. S. Government, and in appre-

ciation of this we recommend that should these members of the profession be called into active service the doctors who shall attend their patients should turn over one-third of the fees collected from such patients to the physician in active service or to his family.”

PLEASE PRESENT THIS LETTER TO ANY DOCTOR WHOM YOU MAY CALL IN TO ATTEND YOU.

Correspondence

THE CHICAGO LEAGUE FOR THE HARD OF HEARING, INC.

101 Auditorium Building, Chicago.

The problems of the hard of hearing are not met as class problems by any organization in Chicago, and, feeling the need of organized help, The Chicago League for the Hard of Hearing was organized in January, 1916, by a group of the hard of hearing and teachers of the deaf. It has worked along the same lines as the New York League for the Hard of Hearing, which is now an organization of some 600 members. Within the past year other leagues have been organized in Boston, San Francisco, Los Angeles and Mobile.

The objects of the Chicago League are:

1. To assist the deaf and hard of hearing in procuring and retaining employment.
2. To encourage the study of lip-reading.
3. To alleviate the social isolation of the deaf and hard of hearing and to assist them in every possible way.

It has seemed necessary to limit our work to some extent and for this reason we are working primarily for those who have lost their hearing as adults, and not for the congenitally deaf who have organizations of their own.

The most difficult and most important part of our work is finding employment for applicants. Many men and women are thrown out of work when their hearing becomes defective, and many are incapacitated for work in lines in which they have been trained. It is almost impossible for them to find work in the usual way. The employment departments of many firms have orders not to employ the handicapped and a deaf man is usually refused work. The league has found it necessary to arouse personal interest in order to secure positions for applicants; but many employers are willing to give work to the deaf if they have had experience in certain lines of work or if they are really fitted for certain positions.

By taking each case individually and by trying to secure work which is suited to each applicant we believe that satisfactory results will be obtained. Deafness in itself does not seem to be the real obstacle in the way of finding work, but deafness plus lack of training is a combination before which employers hesitate. Some of those who have come to the league for help have had no special training and some have

been thrown out of employment because hearing has been necessary in their particular line of work. The difficulty in placing these people has led to plans for vocational training which we hope to carry out in the near future. There are various lines of work in which the deaf can be trained advantageously: among others, printing, book-binding, typewriting, designing and some of the trades, and training in these vocations will enable a man or woman to command a fair salary indefinitely.

The second aim of the league is to give help in lip-reading. It has not seemed necessary to give free lessons because there are eight evening schools in Chicago with free classes in lip-reading, but the league has three free practice classes each week which are a great help, and the league room may be used for lip-reading practice at any time.

The third aim of the league is to overcome the social isolation of the deaf. The room is open every afternoon and one evening a week, and the weekly program consists of an informal tea, a card club—the proceeds of which are donated to the Red Cross—three lip-reading practice classes, lessons in crocheting, embroidering, etc., and Red Cross knitting. A Red Cross auxiliary has been formed and yarn can be supplied to members free of charge. Every month an entertainment of some sort is given, which is planned with the idea of making an appeal through the eyes instead of the ears. An interpretive dancer, a chalk artist, a demonstration of work done by deaf children, and folk dancing are on the program for the winter; and these will be enjoyed by many who for years have been shut off from social activities of any kind.

The average monthly attendance at the league room is about 200; the attendance at special entertainments about 100; the membership of the league about 200, most of whom are hard of hearing. The General Acoustic Company has given us an estimate of 15,000 hard of hearing people in Chicago. If these figures are correct, we have a large field in which to work, and we know from experience that this work is greatly needed. And the point of greatest usefulness can only be reached through an enlarged membership. The league is not a charitable institution, and it solicits no funds. It is maintained by the membership dues and interested friends. Therefore, a large membership is necessary if effective results are to be obtained.

Publicity is greatly needed, and we believe that the co-operation of physicians upon this point would be of inestimable value to us. The work of the league should appeal particularly to physicians, because we are trying to help men and women who have been their patients at one time or another, and whose present need of assistance is the direct result of their incurable physical condition.

We should be glad to have hard of hearing patients sent to us if they are in need of work or of companionship, or if some new interest in life with which to overcome the mental depression which often accom-

panies deafness. We should be glad to have others sent who can give their time to this form of social service; and for those who do not need the help of the league themselves there is always a membership which will enable the league to extend its field of usefulness.

GERTRUDE TORREY.

#### THE LATEST DEVELOPMENT IN PHYSICIANS' AND SURGEONS' LIABILITY INSURANCE POLICIES.

Pursuant to its policy of improving contracts and service, the Aetna Life Insurance Company of Hartford, Conn., is at present submitting to the doctors of Illinois in a new form an old type of protection, interesting to that profession—i. e., Physicians' and Surgeons' Liability Insurance.

We desire to call particular attention to the fact that when a doctor buys liability insurance protection against what are usually called malpractice cases he is purchasing a contract under which he may be compelled to call upon the insurance company for the payment of losses many years hence; this for the reason that during the period that the insurance is being carried for him an act may be committed which will cause a suit to be brought many years hence. A minor has a right to bring suit in Illinois any time before he is twenty-three years of age, and when you add to such a waiting period the time necessary to have a case of this kind finally decided in the Supreme Court of this state you will perceive that it is quite possible that from twenty-five to thirty years after the act was committed you may be looking for the company to pay the judgment that has been recovered against you. On this account it behoves every doctor to purchase this kind of insurance from the strongest possible organization, which, in the course of ordinary human events, will be certain to be here and able to pay the judgment if called on in the far distant future. This comment is particularly germane to this subject when we observe that several presumably strong casualty companies have retired from business during the past two or three years.

The policy is written on a so-called "group plan." It is issued only to members in good standing of medical societies. A single policy only is issued, written in the name of a group of members of the designated medical society. It requires that before it shall become effective a certain percentage of the membership of the society shall adopt this form of insurance and become members of the group. It is in no event written for less than a group of fifteen, and in societies of large membership requires that at least 25 per cent. participate.

The group policy itself is held by a trustee elected by the members of the group, and each doctor named in the policy receives, as evidence of his insurance, a certificate setting forth the exact period that his insurance is carried under the group policy and the premium that he has paid for such protection.

A careful investigation has shown that possibly the



chief cause of malpractice claims is indiscreet criticism of a physician's or surgeon's work by another physician or surgeon. One of the chief advantages of the plan is that in the formation of such groups it will build up a "get together" spirit, and thereby this cause for claims will be largely eliminated.

In short, "Co-operation" is the essence of the "Group Form Plan."

This proposal has been presented and approved by nearly two hundred of the county societies in the United States, and over one hundred and fifty groups in such societies have been successfully formed, and the experience so far developed in the handling of the claims arising against the members of these groups indicates that the result sought to be achieved by the plan can be secured.

The policy provides full and complete protection against every civil claim for malpractice brought by any person, based on any kind of alleged malpractice, error or mistake occurring in the practice of the doctor's profession, until (if ever) it shall be shown that the damage was caused by the assured or any assistant of the assured while to any extent under the influence of intoxicants or narcotics or while engaged in or in consequence of the performance of an unlawful (criminal) act. Unlimited defense, including appeal bonds as security where necessary, is a provision. Over and above this item, its limits of indemnity vary from those of some other companies in this line, in that they are \$5,000 for the individual case, and \$15,000 for each year's claims, instead of \$15,000 for all claims that may develop during the term that the policy is carried, irrespective of the length of time.

One of the most important features of the policy is its special provision relating to the adjustment of claims, the interests of the physician being carefully safeguarded, so that all cases will be properly handled to conserve the best interests of the doctor and medical profession as a whole. The company cannot settle in defiance of the assured's wishes.

The group form plan is now being presented to the various county society memberships in each county by the company's representatives, and the plan should receive the fullest consideration of the medical profession.

H. T. WESTON, M. D.

### MORATORIUM ON LEASES

To the Editor: The Physicians Lease Committee of the Chicago Rotary Club has written a great many letters and we have brought relief to a great many doctors because of the wonderful co-operation we have had from the Medical Journals.

The publicity obtained has been far reaching and has influenced legislation in that direction.

We suggest that your publication call the attention of your subscribers to Senate Bill No.

2859 entered by Senator Chamberlain. The purpose of this bill is to protect the civil rights of soldiers and sailors during the period of the war.

The bill practically declares a moratorium on leases, mortgages and life insurance policies while in the United States service, during the present war.

We suggest therefore that you have your subscribers send for a copy of the bill and get behind their congressmen and senators for the purpose of having this bill or a similar bill passed through the next session of Congress.

Thanking you for such notice and publicity you may give this matter, I wish to remain

Yours very truly,

R. R. DENNY,

Chairman of the Physicians Lease Committee,  
Chicago Rotary Club.

### ANNOUNCEMENT

At about the time that the *Medical Review of Reviews* was founded, Professor Dillon Brown, of New York, established a semi-monthly journal devoted to the diseases of children, called *Pediatrics*. The opening article was by A. Jacobi, and the leading physicians of the city, among them J. Lewis Smith, Reginald H. Sayre and William H. Park contributed to its pages. Latterly it has been edited by William Edward Fitch, but Dr. Fitch has recently been appointed a major in the United States Army, and we have acquired his blue-pencil and subscription list.

*Pediatrics* will no longer appear as a separate publication, but has been incorporated with the *Medical Review of Reviews*. Beginning with January, however, the *Medical Review of Reviews* will contain a special department devoted to Pediatrics. This feature is but one of the improvements scheduled for the coming year. Important Symposia are now in progress. The editor will contribute a second series of Pathfinders in Medicine, a staff of Associate Editors is being formed, and thus the *Medical Review of Reviews* in entering upon its twenty-fourth annual volume, promises to be more serviceable to the profession than ever before.

Sincerely,

FREDERIC H. ROBINSON.

### BIRTH REPORTING.

The U. S. Bureau of the Census has recently issued its first annual report on "Birth Statistics" for the year 1915. This report presents statistics covering the registration area for births recently established by the bureau, including the six New England states, New York, Pennsylvania, Michigan, Minnesota and the District of Columbia. These states comprise about one-third of the total population of the country, and as more states enact and enforce satisfactory laws for the reporting of births, they will be added to the registration area in subsequent reports.

Different tables give the number of births by states, counties and cities and a comparison of birth and death rates.

It is especially noteworthy that the white birth rate for the total registration area was 25.0 per thousand population and the white death rate was 13.8, indicating a net population increase (independent of migration) of 11.2 per thousand. The colored birth rate, on the contrary, was only 20.6 and the death rate was 22.9, indicating an actual decrease of the colored population, unless offset by immigration in the area covered. It is possible, however, that the registration of births is not as complete among colored as among white persons and that, therefore, the rates shown for the former class are too low.

### LITTLE PURE ZINC OXIDE ON THE MARKET.

Examinations made by the Bureau of Chemistry of the United States Department of Agriculture show that very little zinc oxide on the market in the United States complies with the standards of the U. S. Pharmacopoeia. Nearly all of the samples examined contained an excessive amount of lead. The samples were labeled "Not U. S. P.—Containing Small Quantities of Lead," and therefore complied with the Food and Drugs Act. The labels on the packages in most instances will probably come to the attention of the druggists, but not to the attention of physicians. The medical profession will, therefore, not be advised as to whether or not zinc oxide preparations are made from standard ingredients. Conditions may arise where a zinc oxide preparation contaminated with lead may do injury. A limited supply of U. S. P. zinc oxide is available and physicians may protect themselves and their patients from possible injury by calling for such material on their prescriptions.

### EXEMPTION BOARD RECOGNIZES ANTI T. B. WORK.

FREES DIRECTOR OF FRAMINGHAM DEMONSTRATION ON THE GROUND OF NATIONAL IMPORTANCE OF CAMPAIGN.

NEW YORK, October 10.—The importance of the Community Health and Tuberculosis Demonstration at Framingham, Mass., has just been officially recognized in a strikingly practical way by the exemption

from military service of Dr. Donald B. Armstrong, Executive Officer of this work. The District Exemption Board, in passing on his case, ruled that he was performing a service essential to the interest welfare of the nation in time of war.

At the headquarters of the National Association for the Study and Prevention of Tuberculosis here, this decision is hailed as definitely putting on the map not only the Framingham work, but the entire anti-tuberculosis war program. The exemption of Dr. Armstrong is held to be peculiarly significant in view of the shortage of physicians eligible for military service.

The Framingham Demonstration aims to determine methods of stamping out tuberculosis in a community by a system of complete control of the social conditions that cause disease. It was begun a year ago and is being carried on under the direction of the National Association for the Study and Prevention of Tuberculosis with a \$100,000 fund contributed by the Metropolitan Life Insurance Company.

The exemption of Dr. Armstrong was the result of a claim made by the National Association, backed by statements and affidavits from over fifty leading medical and health authorities of the country.

In this claim it was pointed out that the Demonstration from its beginning was planned by Dr. Armstrong and that a change of directorship now would practically undo the work of a whole year. It adds: "This work is of prime importance not only to the factories in Framingham, including several engaged on government war contracts, but also as a demonstration to industry throughout the United States, both in the present emergency and in the period of intensive health conservation in industry which of necessity will follow the war."

The Demonstration began with an educational campaign of special literature, newspaper articles and public meetings. A local organization was formed to co-operate in the work and to continue it after the demonstration is completed. Then followed a careful study of all the social and industrial conditions of the town and its surroundings, water and food supplies, sanitation of buildings, streets, etc., factory hazards, poverty and its causes, the surroundings of infancy and childhood. As each disease factor is discovered, methods for combating it are established. Two of the most important methods are systematic education of mothers in the care of children and periodical medical examinations for the discovery and prevention of disease in its earliest stages. In the meantime all active cases of tuberculosis are being sought out and isolated where they can receive proper medical and nursing care and no longer infect their families and associates. The Demonstration is to cover a period of three years.

### GUIDE FOR FORMULATING A MILK ORDINANCE.

Washington, D. C.—To assist communities in making their milk supply safe, the United States Depart-



ment of Agriculture has issued a "Guide for Formulating a Milk Ordinance." This document, Department Bulletin 585, suggests a form of ordinance designed to protect the community against fraud and disease and to insure cleanliness in the production and handling of milk. Health officers and physicians interested in improving milk supplies may obtain it free on application to the department.

## UNITED STATES CIVIL-SERVICE EXAMINATIONS.

### STENOGRAPHERS AND TYPEWRITERS WANTED. MEN AND WOMEN.

The United States Government is in urgent need of thousands of typewriter operators and stenographers and typewriters. All who pass examinations for the departments and offices at Washington, D. C., are assured of certification for appointment. It is the manifest duty of citizens with this special knowledge to use it at this time where it will be of most value to the Government. Women especially are urged to undertake this office work. Those who have not the required training are encouraged to undergo instruction at once.

Examinations for the Departmental Service, for both men and women, are held every Tuesday, in 450 of the principal cities of the United States, and applications may be filed with the Commission at Washington, D. C., at any time.

The entrance salary ranges from \$1,000 to \$1,200 a year. Advancement of capable employees to higher salaries is reasonably rapid.

Applicants must have reached their eighteenth birthday on the date of the examination.

For full information in regard to the scope and character of the examination and for application blanks address the U. S. Civil Service Commission, Washington, D. C., or the Secretary of the U. S. Civil Service Board of Examiners at Boston, Mass.; New York, N. Y.; Philadelphia, Pa.; Atlanta, Ga.; Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; St. Louis, Mo.; New Orleans, La.; Seattle, Wash.; San Francisco, Cal.; Honolulu, Hawaii; or San Juan, Porto Rico.

JOHN A. McILHENNY,  
President, U. S. Civil Service Commission,  
Washington, D. C.

## Public Health

### ILLINOIS STATISTICS IMPROVING

Springfield, Ill., November 1.—One of the most active divisions of the Illinois State Department of Public Health at this time is the Division of Vital Statistics. The chief efforts are making in behalf of the registration area movement, as applied in Illinois.

Illinois, in the past, has been notoriously lax in its registration of births and deaths. Until very recently there has been no adequate provision for the assem-

bling of such statistics in a central state department. Now, however, new laws are operative which, if supported by local registrars, physicians, midwives and undertakers, will lead to a registration of substantially 100 per cent. of the births, still-births and deaths as they occur in Illinois.

Director C. St. Clair Drake, of the Illinois Health Department, through his Vital Statistics and Publicity divisions, is waging an energetic and determined campaign aimed to bring the matter of registrations up to where it should be. The registration area, as prescribed by the federal government, contemplates a registration of at least 90 per cent. of the births, still-births and deaths before a state can be said to have entitled itself to such recognition. Data on progress each state is making is secured by United States census officials, one of whom is expected to visit Illinois before the close of 1917.

In addition to the publicity campaign which is in progress in connection with the registration area movement, division men from the State Department of Health are devoting what time they can to meetings with county and township officials. The Illinois law requires that all births be reported within ten days by physicians, midwives or other attendants to local registrars (usually the town or city clerks); and that all deaths be reported at once by undertakers to the local registrars. The registrars, in turn, send their reports to the state office at Springfield, where the records are kept uniform and bound, and secure in a vault.

### POLIOMYELITIS

The State Department of Health has noted a material decline in the number of poliomyelitis cases throughout the state in the last ten days. In the week ending October 28 but 38 cases were reported. Twenty of those were in the city of Chicago. Most of the infantile paralysis has been in central and northern Illinois. Without endeavoring to minimize the effects of ravages of the disease, the State Department of Public Health has devoted some time in the last month to an educational campaign, designed to take the "scare" out of conditions attending poliomyelitis, and substitute a sane, hasty, yet composed manner of obtaining medical service when cases are actual or suspected. The department would regard its mission in this regard as well performed, if, in disseminating its doctrine of sane and non-hysterical procedure, it brought about a marked reduction in number of permanent deformities of victims of the disease.

### LOCAL EPIDEMICS

Epidemics just now do not seriously menace the health of Illinois citizens. At Edwardsville, Madison county, a larger number of cases of diphtheria than ordinarily occur at this time of year have developed in the last two weeks. At Galatia, Saline county, a bad situation was found with reference to smallpox. A neighboring town reported to the State Department of Health that smallpox existed at Galatia, and, on investigation, it was found that, up to the last of October,

there were 19 cases, none of which had been reported by the local authorities to the state. At Caseyville, Ill., 15 cases of smallpox were found that had not been reported to the state authorities.

A peculiar incident occurred in Divernon, Sangamon county, late in October. William Hutton, who was married, and who returned from his wedding trip, was a guest, with his bride, at a reception given in their honor. Unknown to the guests, Hutton had contracted smallpox. As a result, thirteen cases in four different counties have been traced to exposure during the wedding reception, and others are suspected. Mrs. Hutton was among the later sufferers. All the victims were placed under quarantine.

### COUNTY SANATORIA

The interests of the county sanatoria movement probably never were better, or more intelligently promoted than at the meeting of the State Supervisors' Association in Joliet on October 11. Assistant Director of Public Health George T. Palmer was present and addressed the meeting, at which supervisors from substantially every county of the state were present, and in addition had opportunity to discuss, informally, the sanatorium question with individual supervisors who heretofore have not been familiar with its operation. It is confidently expected that 1918 will witness a gratifying progress toward establishing sanatoria in a majority of the counties of Illinois.

### INTESTINAL STASIS.

(Continued from Page 357)

arthritis can be cured or even benefited by resecting the colon is preposterous.

In intestinal stasis with extreme prolapse of the stomach and colon where the stomach is down in the pelvis, as I said before, the milk diet, rest in bed and the postural treatment will do wonders in many cases. It is difficult to do and unless you can get the confidence and co-operation of the patient you will fail. I have seen many patients resist, rebel and beg against carrying out this treatment, but with encouragement and persistence the most of them will win out and it is astonishing how easily they will handle themselves afterwards and continue the treatment, retaining their health which they have gained by so hard a struggle.

We have only to read the booklets and pamphlets of medical houses to know the virtues of liquid petroleum in curing intestinal stasis. An ounce or two before each meal and at bedtime will cure the most obstinate case, according to these statements. In spite of the exaggerated and extravagant claims of this product, it is

an important mechanical agent in the treatment of this condition. It is beneficial in any line of treatment whether it be medical or surgical.

To summarize: Intestinal stasis is a condition demonstrated by a positive set of symptoms causing very serious ill health. It is associated with a number of abnormal positions and conditions of the digestive tract, but these conditions do not necessarily cause it. The chief cause is probably an abnormal ileocecal valve. When it is associated with extreme ptosis, surgical methods may be adopted at the beginning of treatment. Where it exists without displacements and where it is reasonable to suspect the ileocecal to be incompetent that valve should be restored. As a rule, however, general methods should be given a thorough trial before resorting to surgical operations.

## Society Proceedings

### COOK COUNTY

#### CHICAGO LARYNOLOGICAL AND OTALOGICAL SOCIETY

(Meeting of April 17, 1917, Continued.)

Ophthalmoscopic examination showed optic nerve atrophy, no swelling of discs, some tortuous arteries; the disc edges were blurred and the adjacent retinal area was grayish. There was a large, painful lymph gland on the left side of the neck. No history of malignancy in the family, no cough, or evidence of pulmonary tuberculosis. The Wasserman was negative. The nasal obstruction had been coming on gradually for several months. A diagnosis of sarcoma was made and confirmed by microscopic examination of tissue removed.

On refusal to operate the patient disappeared. Operation elsewhere resulted in severe hemorrhage and was followed by infection which necessitated an external incision over the right malar region to liberate the pus. Six weeks later the patient returned and was immediately placed on radium treatment. One hundred milligrams of radium were applied uninterruptedly for five hours on three consecutive days. Nineteen days later this was repeated, the radium being applied for six hours each day. Thirty days later fifty milligrams were applied for four hours, and sixty days later the same amount was applied on two consecutive days for six hours each. In addition, radium was applied to the large, painful gland on the left side of the neck. A total of 4,100 milligram hours of radium was applied to the enlarged glands. In employing the remedy the object was to use large doses over a medium period of time, correctly screened and properly applied within the nose and on the face, to secure the most benefit from cross firing. The immediate results from



this treatment were brilliant; the severe pain and nasal hemorrhage disappeared within a week. A week later he was breathing through his left nostril and some air was passing through the right nostril. Three months later respiration through both nostrils was normal and he could blow nose naturally. Inspection showed progressive shrinking of the tumor and disappearance of all ulcerations. The rhinoscope demonstrated the tumor springing from the posterior ethmoid region, which explained the ocular changes. On last examination no evidence of tumor could be seen within the nose or nasopharynx. Three weeks later he was reported as being confined to bed at home with a temperature, pain in the abdomen, nausea, constipation and a cutaneous eruption over the left half of face. A few days later the family physician reported that the patient was suffering from metastasis in the intestines and could not recover. Ten days later he died. Autopsy revealed absolutely no sign of sarcoma in the head and no signs of metastases could be found in the body or on the skin. Examination of the abdominal cavity disclosed a distended gall bladder and a perforated appendix lying in a bed of pus and exudate. The eruption on the face was herpetic, toxic in origin, and the patient had died as a result of peritonitis caused by perforating appendicitis.

#### DISCUSSION.

DR. ALBERT WOELFEL said that however one might evaluate this report as evidence of a case of sarcoma cured by radium, it was a very good example of the peculiar susceptibility to the action of radium of sarcomas of the upper respiratory passage. It is believed that round celled sarcomas generally respond to radium treatment more readily than other forms, but it is also an observation of radium users that tumors that are nominally of the same type show a different response to radium treatment in different parts of the system. Another thing the case illustrated was the efficiency of distance irradiations. The paper also illustrated the mistaken idea that seems to prevail that large doses of radium are necessary to effect such changes in sarcomata. The reports of Kelly regarding the use of such large amounts of radium have been puzzling, and the only way we can account for them is that he must be using the emanation from these large amounts of radium, which could have quite a different radiating power, unless it is drawn off when the radium is in equilibrium. If such large amounts of radium were applied for any time at close range they would have a burning effect that would not be beneficial.

The final point was that in using radium we should not be so impatient of results; it takes time for the effect to develop. Probably the best general technic to adopt is to begin a series of irradiations, get the gross effect and then wait for some weeks to finally get after the treatment to effect the end result.

DR. JOSEPH C. BECK cited two cases of sarcoma which had been treated by Dr. Woelfel by large doses of radium; one was sarcoma of the hard palate, the other of the larynx. In the case of palatal sarcoma the patient received 125 mgrs. for twenty-four hours in three different treatments, and following that went home. He returned in less than two weeks, when the tumor had entirely disappeared, but he presented a very severe burn on the tongue and of the soft palate, which was very painful, and was produced by the action of the radium. The Doctor had used a screen of a rubber material which contained some metal, which was a mistake and would not happen again, but he thought the accident should be mentioned. There had been no return of the sarcoma after two months.

In the case of sarcoma of the larynx the growth simply melted away. Recent section had shown very few sarcoma cells and very little remained of the tumor. The patient was to have more radium treatment, which he hoped would cure the sarcoma which had been removed twice by external and internal operations and had also been burned by the Percy cautery.

He reported two other cases successfully treated with radium and called attention to the fact that sarcomata are greatly influenced by the x-ray also, deep penetration treatment having almost as good an effect as radium in many cases. Arsenic used in the form of salvarsan or cacodylate of soda is also very effective.

DR. ROBERT SONNENSCHNEIN said that some years ago he had an opportunity while working in Koenigsberg of reporting the longest standing case of sarcoma of the nose on record. The patient lived for eleven years after the diagnosis was made. It had been shown that sarcoma of the nose is particularly benign as compared with tumors elsewhere. He did not know whether that had a bearing on the cases mentioned here in regard to the efficiency of radium and x-rays, but it may be that the character of the tumor in this location is such that it is more amenable to treatment than elsewhere.

DR. CHARLES H. LONG thought an important thing was the diagnosis of the tumor, and cited the case of a small boy who was brought to the hospital for removal of adenoids. These were removed and the boy went home, but returned with hemorrhages in the throat. Dr. Zeit examined the specimen and pronounced it sarcoma. The patient was brought to Dr. Long and a special tube was devised for the use of x-ray. Three treatments were given and at each treatment a severe hemorrhage took place with pain in the head, so the mother refused continuation of the treatment. He kept in touch with the case for a year, when he was hurriedly summoned as the boy was supposedly dying of suffocation. The patient presented all the symptoms Dr. Stein spoke of, and examination revealed a long, narrow piece of flesh lying parallel with the tongue, which seemed to have an attachment in the throat. This was very sensitive and movable, only twisted on its pedicle and had become strangulated. The child was sent to the hospital, another examination was made and the report was fibroma. According to the literature it is often difficult to differentiate between round celled sarcoma and fibroma in their early stages. They removed a tumor which was larger than a goose egg and had many tentacles beside the one in the mouth. The growth was removed through the mouth by incising the hard and soft palate, encircling the pedicle of the growth with a wire snare, then resecting the roots, which were widely attached. The child made a good recovery.

DR. C. W. HANFORD thought it was well in such cases as Dr. Stein reported to start with 100 mgs. and quickly diminish it to about 40 mgs. or even less. He believed no amount of radium, small or large, would have any effect on carcinomas of the tonsils or base of the tongue, except possibly to add a few months to the patient's life and keep them more comfortable. He called attention to the clever appliances that have been devised for holding radium in contact with growths of the soft palate, thus causing them to disappear very rapidly.

DR. STEIN, closing, said he had used radium in this case with a great deal of misgiving—first, because of the discouraging reports and, second, because it has been almost impossible up to this time to get a sufficient amount of radium. He thought radium to be of any value had to be used in large amounts properly applied. He realized that sarcomatous growths in the nose sometimes disappear spontaneously, but since the growth in this case had disappeared under the application of radium, and they were fortunate enough to be able to prove its disappearance by the post mortem findings, he felt justified in thinking that radium had produced the change.

He had been surprised to hear Dr. Beck speak so favorably of radium, as he had discouraged him greatly in the past concerning its use. Perhaps the Doctor's change of opinion had been brought about by the use of larger amounts of radium, and it might not have been applied properly. He hesitated to take the improvement of any of the cases reported by Dr. Beck very seriously, as they were evidently very recent cases. He believed a longer period of time should elapse before such cases were reported—and something more than merely improvement in the condition.

There is still much to learn about radium, but such cases as this are highly instructive.

DR. JOSEPH C. BECK (replying to Dr. Stein) said the reason Dr. Stein was able to make such a definite report was by reason of the untimely death of the patient. He thought the criticism of his report was not well taken; the report was not

made as final, but he believed in such cases it was well to make a report from time to time. The case of palatal tumor had not returned after two months but may still recur. Ten years ago he reported on his negative results with what he thought was radium, but it was not pure. He had subsequently used ten milligrams of pure radium, which was as much as he could afford to have in his possession at that time. Neither of these amounts was sufficient in such desperate cases as cancer. Since it had become possible to have access to large amounts he had gone to work again and was reporting his present results. Under no circumstances did he wish, by his reports, to discourage anyone from experimenting, but he believed in being very critical in the use of these new methods of treatment, since truth will out.

#### CHICAGO OPHTHALMOLOGICAL SOCIETY.

A regular meeting was held, May 21, 1917, with Dr. Francis Lane in the chair.

#### REPORT OF FOUR CASES OF OCULAR TUBERCULOSIS TREATED BY TUBERCULIN.

Dr. Thomas Faith said that these cases were selected from amongst a number of cases of tuberculosis of the eye which had come under his care in the past ten years, and have been chosen because of the fact that in addition to the general interest attached to such cases each case teaches a lesson which should be remembered if we are to manage the treatment of this affection to the best advantage.

One was a case of sclero-keratitis, two of choroiditis, and one of optic neuritis or neuro-retinitis.

The report of the following case will serve as an illustration of the other three: Patient, Mrs. A. M., aged 23, housewife, was seen first December 30, 1911. She was of a family of five children, three living, two sisters older than the patient died from some pulmonary trouble. Father living at the age of 66. Mother died when patient was 8 years old, cause not known. Two brothers younger than patient are living and in apparently good health. Personal history: Has never been robust. Has had swellings in the neck since a small girl; has suffered from indigestion and intercostal neuralgia much of the time for several weeks; looks pale and is under weight. She had an attack of pain and inflammation in the left eye eight months ago, which was diagnosed iritis, and for which she was treated over a period of five or six weeks. She complains now of pain and inflammation in the right eye, present one week. This condition followed immediately after a severe attack of lumbago and sore throat. There was a typical anterior scleritis present with swelling and tenderness just beyond the upper margin of the cornea. Atropin, dionin and hot applications were ordered locally, and calomel and salicylate of soda internally. A urinalysis at this time was negative. The nose and throat were examined and evidence of the previous attack of tonsillitis could be easily seen. There were several enlarged glands in the posterior cervical region, and the glands of the internal jugular area were also enlarged. There was no venereal history and a negative Wassermann was obtained in the next two days. The pupil dilated well under atropin, but the eye remained painful and tender with only an occasional slight improvement for the two following weeks. A thorough, painstaking

physical examination was then made as well as a blood count and nothing of any importance was found. He then determined to remove the tonsils as they were distinctly diseased, and did so on the sixteenth of January, 1912, using the Tydings snare. He thought at first that he had found the cause of the trouble as there was a distinct improvement for the first weeks after the tonsillectomy; but by the tenth day after the operation the condition was as severe as before. For two weeks following this time, in spite of the negative Wassermann, patient was put upon inunctions of mercury and iodid of sodium and instead of improving continued to grow progressively worse. After doing the tonsillectomy and during the time that the antiluetic treatment was being administered the patient's temperature was kept track of each time that she came to the office and it was observed that the afternoon temperature was usually above normal. From the 12th to the 20th of February patient was kept quiet at home, and the temperature recorded every 3 hours from waking until bed time. The result of this test was that he found the patient's temperature ranging from 97 to 98° F. in the morning to 99.8 or 100.2° in the evening. At this time the infiltration had extended well into the cornea and the sclera was thickened, swollen and tender.

On February 20, 0.5 mg. of C. T. was given and was followed in 18 hours by a sharp general and focal reaction. Temperature went to 101.6°. The eye became more inflamed and painful, and there was some soreness of the glands of the neck. Following this there was a gradual subsidence of the temperature and an improvement in the eye condition. After about 12 days, when the temperature had receded to and remained at the same average as before the test, treatment was begun with Mulford's T. R., No. 1, and this was repeated at three-day intervals, gradually increasing the dose in the usual proportion and watching constantly for evidence of reaction. This came with the fifth dose and he was obliged to rest a week and then increase the interval to five days, and when the dose had been raised to 1-1000 mg. the interval was increased to seven-day periods and was so continued.

There were never any new nodules formed on the sclera after the fifth injection, and the temperature only went above 99° twice after the twelfth treatment. The eye began to clear rapidly after the sixth injection and by the time the tenth was given there was not a trace of active inflammation remaining. This case was given in all 22 injections, and up to September, 1914, had never had a recurrence. Her adenitis disappeared and her general health was improved in every way.

After citing reports in detail of the other three cases, Dr. Faith stated that each of these cases teach an important and valuable lesson. Case 1 shows that a tubercular process may be engrafted upon or added to some other even acute condition which seems to prepare the tissues for the localization of the tubercular process. Case 2 shows that even in the absence of any definite physical finding in the chest, the diagnostic dose should always be a small one in order to



prevent not only local, but possibly general disaster to the patient. This case also shows that an injury may be the determining factor in the localization of a tubercular process. All four of these cases teach one not to rely too much upon physical examination of the chest for corroborative evidence in making the diagnosis. Case 4 demonstrates that it is sometimes necessary to make a number of diagnostic tuberculin tests before making up one's mind as to the presence or absence of tuberculosis as the causative factor in the case. Two of the cases likewise show that one should not be tempted to make the injections at too short intervals or to increase the size of the dose too rapidly. It is well to give the smallest possible dose which will produce a result without a reaction.

#### DISCUSSION.

DR. GEORGE F. SUKER stated that Case 2 cited by the essayist was a very illustrative case, showing that the diagnostic dose of tuberculin was too large and the end result therefore disastrous. Tuberculin diagnostically used was a double edge sword, and one could, without these large doses of tuberculin, diagnose tuberculosis. An x-ray should be taken. One could have lymphatic nodes in the presternal region. One could have a temperature chart, and whether the tuberculosis be local in the eye, or be limited to the lung tissue, the signs and symptoms and the general course of temperature must be and often are alike. It made no difference whether the patient had tuberculosis of the big toe or eye, that patient was bound to run a temperature, and if one took the temperature at regular short intervals he would find it was elevated, hence it was advisable to guard against the use of excessively large doses of tuberculin for diagnostic purposes, as they were disastrous to the eye. The smallest possible dose of tuberculin that gives a minimum reaction is more than sufficient to make a diagnosis, and the therapeutic dose should never give any reaction. The therapeutic dose should not be repeated too often in quick succession; long intervals between injections is better. Furthermore, the general regimen of the patient should be properly taken care of. Tuberculosis of the eye should be treated upon the principles underlying the treatment of a tuberculosis of the lung. Tuberculosis of the posterior globe was usually one of chronicity and not of acuteness.

As to tuberculosis of the choroid, it had been the speaker's observation, both personally and from the literature, that such lesions of the choroid should be gingerly handled as regards the injection of tuberculin for therapeutic purposes, rather more so than tuberculosis of the iris or of the ciliary body and processes. All intraocular tubercular lesions are very apt to give some systemic symptoms, if one searched carefully for them.

DR. RICHARD J. TIVNEN said there was no class of cases that caused the ophthalmologist more distress and taxed his patience more than these tubercular subjects. It required an infinite amount of perseverance and an infinite amount of assurance and stimulus on part of the patient to assure him that he should continue and fight it out. He endorsed the paper because the essayist had outlined a definite procedure for handling these cases and had pointed out the great danger from the use of tuberculin when given in too large doses. Any one who had used tuberculin quickly found out it was one of the most dangerous agents at the command of the ophthalmologist, particularly so from two standpoints. First, to be able to determine precisely the individual dose that is suitable for the particular patient that confronted the practitioner, and second, the problem was how frequently the dose should be administered. Some one had said there was no such thing as dosage and this was particularly true of tuberculin.

Another point the speaker emphasized was this: There was no class of cases where teamwork was more essential than in these cases of ocular tuberculosis—teamwork with the internist and with the nose man, and so on.

These patients should, if possible, be kept under observation

in a hospital. They should not be of the ambulatory type. While Dr. Faith had some of his cases under observation for six months it was difficult to keep patients under observation for that length of time. When one undertook to treat a case of this nature he should follow a definite line of procedure, and if this was done in the handling of these cases, both from the diagnostic and therapeutic side, great good could be accomplished.

DR. WILLIS O. NANCE stated that the results from the use of tuberculin in his experience had been rather varied. In some cases he had been able to get almost magical results, and in other instances the results had been disappointing.

Since the publication of Verhoeff's monograph several years ago on the etiology of scleritis in which attention was called to the fact that the majority of these cases were due to tuberculosis, the speaker had followed out treatment along these lines in all cases, except where he believed there was some other etiologic factor. He called attention to a case he had under observation at the present time. A woman had had recurrent attacks of scleritis for more than two years, had been treated by a number of ophthalmologists of Chicago, and when she came under his observation last fall he had a tuberculin test made, and a very thorough physical examination made, including the microscopic and clinical examinations. The conclusion was that the patient was suffering from ocular tuberculosis. She responded promptly to the tuberculin test. The Wassermann test was negative. She had had three Wassermanns made at different times. Dr. Nance treated her with tuberculin T. R. and about the 10th or 12th injection she developed a very severe focal reaction. In fact, it alarmed her, she stating that the eye was in a worse condition than it had been during the two years she had been suffering from the disease. There was absolutely no benefit whatever from any of the injections. The result was so alarming that he decided he would allow the patient to fast for a while as far as injections were concerned, and he substituted the iodid of potassium. He began with 30 grains a day and rapidly increased it until it reached about 60 grains, three times a day. The eye began to clear up and the dose was finally increased to 270 grains a day, and very soon the eye was perfectly clear. The amount was then reduced to 150 grains a day, which she is taking at the present time, with a very satisfactory result. This case showed that the Wassermann test was not a positive diagnostic test, neither was the tuberculin test always positive by any means. This patient showed no symptoms whatever of syphilis in any form. The family history was excellent, yet this case of scleritis yielded beautifully to large doses of iodid of potassium.

#### TOTAL SYMBLEPHARON.

Dr. J. A. Pratt, of Aurora, said that in total symblepharon, as well as in any symblepharon, the aim of the surgeon should be to restore the condition to normal with the least possible operative procedure. To Hotze, Wilder, Weeks and Woodruff, we owe the great advance in operating for this condition. The paraffin coated block tin plates, and Weeks' method of restoration of the inferior cul-de-sac by anchorage to the periosteum of the rim of the orbit, has made the transplanting of the Thiersch grafts possible. In previous operations his difficulty was the placing of the grafts, and he presented a method, while possibly not new, he was unable to find it described. It was the suturing of the Thiersch grafts to the block tin plate, which avoided all difficulty in the handling of the grafts, and greatly simplified the operation.

The case which he reported was operated upon by this method. About six months previous to his seeing the patient he was burned by hot metal. The eye was destroyed as well as parts of the edges of both the upper and lower lids. The eye was eviscerated by the attending physician and when healed there was

total symblepharon with a fissure where the palpebral opening existed. The mucous membrane was entirely destroyed.

With such an extensive surface the question of manipulating the large grafts necessary to cover the wound, brought forward the idea to suture the grafts to the plate. A plate of block tin a little larger than a normal conjunctival sac and curved to fit the same was made. A double row of holes was bored through the center in the longer diameter, so it would only be necessary to cut a graft large enough to cover one-half of the plate, and each graft could be sutured on separately. Commercial paraffin was used to coat the plate, care being taken to clean each hole of the paraffin.

After the grafts were cut from the arm they were sutured to the plate with the raw side out and the sutures tied on the convex surface. The plate with the grafts attached was now placed in the normal warm salt solution.

In preparing the socket, the lids were first dissected free from the shrunken globe for about one-eighth of an inch, and an anchor suture passed through the globe, to be used to draw the stump in different directions while dissecting off the lids. The lid dissection was performed with a Beard lid knife, to the extreme limit of a normal superior cul-de-sac, and to the orbital edge inferiorly. After the dissection the orbital edge should be felt sharp and distinct. After the wound was dry, the plate with the grafts was slipped into place and allowed to remain free. Both eyes were now bandaged and the patient kept in bed. On the second day the bandage was removed from the operated side, and an instrument passed between the edges of the lids, and the secretion was removed. Thirty-five per cent. argyrol was now instilled. He had prevented partial symblepharon in fresh burns in the eyes by the instillation of 35 per cent. argyrol, after separating the raw surfaces. The coagulation and deposit kept the surfaces from growing together. This line of treatment was continued for 6 days, at which time the sutures used to hold the grafts to the plate were removed, leaving the plate free and the grafts adherent to the new socket. The bandage was now removed from the well eye and the patient allowed to go home and report to the office for treatment.

The holes in the plate allowed the cavity to be flushed. At the end of 20 days the plate was removed, small granulation points were nipped off and a smaller prosthesis of block tin was introduced. The cavity continued to shrink, and at the time the case was presented to the society, October 16, 1916, the prosthesis worn was about one-half the size of the original operative prosthesis and the cavity was entirely lined by epithelium. The case was presented for advice in reference to the use of foreskin in deepening the shrunken superior and inferior cul-de-sac. Dr. Suker at that time advised against the use of foreskin because of its future shrinkage, but later at the academy meeting in Memphis, recommended its use for these cases.

In the second operation to deepen the superior and inferior fornix, half moon plates were used with a row of holes at the palpebral edge through which to suture the grafts, while in the edge of the plates opposite the sutures holes were placed, two holes for anchor sutures.

The Weeks' operation for the restoration of the inferior cul-de-sac was performed. In operating on the superior cul-de-sac the anchor sutures were brought out at the superior edge of the orbit and tied over a roll of gauze. The technic of placing the grafts was the same as in the first operation, except that grafts were sutured to the enlarged external and internal canthi. The results which were seen in the picture submitted were obtained by these two operations.

The author considered there were two mistakes in the first operation. First, the grafts were made a little too small, and, second, the external and internal canthi should have been covered by suturing grafts to the same. He felt confident that if these two mistakes had not been made the socket would have been completely restored by the first operation.

#### DISCUSSION.

DR. GEORGE F. SUKER said the use of foreskin was not very applicable when one wanted to cover a large surface, as it had a tendency to contract too rapidly, particularly where excessive cicatricial tissue had already been formed, and where one had to cut cicatricial tissue to get a space to be filled in with a graft. He had discarded the use of foreskin for grafting, with the exception, perhaps, in cases of resection of the tarsus for trachoma for the restoration of the retrotarsal fold.

He had under observation a patient who had a complete symblepharon of the upper and lower lids, and an intact eyeball, in which he succeeded in freeing the upper and lower lids, and today this man was able to recognize daylight from darkness and recognize moving objects. In this particular case he used foreskin seven or eight times, and he was still trying to get a suitable graft to further enlarge the upper cul-de-sac.

As to fixing the graft to the plate, he stated that the late Dr. Hotz employed that method constantly before he inserted the graft. The secret of successful grafting is that the graft should be fixed to the plate as well as to the receiving area by means of sutures. Second, the graft should be three or four or even six times larger than the area to be filled in. He had seen transplanted grafts half the size of his hand or even larger shrivel down to almost nothing. It is the fixing of the graft to the plate and edges of receiving area that prevents shrinking in a goodly measure.

DR. WILLIS O. NANCE said the case reported by Dr. Pratt was an exceedingly interesting one and the result very good. It was an operation that was devised, he thought, by one of the members of the Society, Dr. Harry Woodruff, about ten years ago. Dr. Woodruff did considerable work along this line at the Eye and Ear Infirmary at the time, including attaching of the graft to the plate. The speaker did the operation a number of times and remembered very well an experience he had at first in getting the graft properly sutured to the plate. It was not an easy thing always to do this. He cautioned the members of the Society against using this method in cases of partial symblepharon in which the eyeball remained in the orbit. He had seen a cornea become necrotic as the probable result of the insertion of a metal plate in the eye. Since that time he had been very careful about using this method in cases where the eyeball remained in the orbit.

DR. RICHARD J. TIVNEN, in speaking of the method of anchoring the graft to a tin plate, said he saw Dr. Woodruff employ this method at the Eye and Ear Infirmary. In a recent case he had the same difficulty that Dr. Pratt had from adhesions forming about the inner canthus, and he was glad to know



the use of argyrol prevented the formation of these adhesions. Shrinkage could be prevented by inserting a block tin plate and keeping it there for a certain length of time so that things became adjusted more or less permanently.

It was difficult to get a graft large enough; it should be very much larger than the area one was going to cover. Proper anchorage of the graft was the vital thing. Sometimes the speaker had taken the graft for the upper cul-de-sac and inserted a suture in the apex or button, and in addition put in a block tin plate. A difficulty had been in getting the surfaces apart at the inner and external canthi.

DR. THOMAS FAITH thought the method described by Dr. Pratt of anchoring the graft was a little different from that usually employed. If he understood him rightly, he anchored not only the graft but the plate up in the cul-de-sac. Most operators attached them to the edge of the lid, keeping them in that position, and allowed the plate to hold itself in the cul-de-sac by being fastened to the lid. He had seen a number of cases in which the plate had been gradually pushed out before one was ready to take it out. The scheme of anchoring the graft to the plate and all would obviate that.

DR. FRANCIS LANE said a point was brought out in the preparation of the Thiersch graft that the vascularized tips of the papillae of the skin should be left intact when laid on a dry surface. With slight oozing of serum, the capillaries very rapidly grew from the prepared surface into the vascularized tips and minimized the shrinking process which took place after the graft was put in place.

### GLAUCOMA AND AUTOINTOXICATION.

Dr. Clark W. Hawley presented for consideration a report of four cases of glaucoma that had been under his care for the past year. In these cases his results had been so superior to any that he had been able to get before he felt justified in bringing them to the attention of the society.

A year ago he received a call to see a patient in a neighboring village who was said to be suffering from iritis. The patient was a lady, who, at the breakfast table, found that she could not recognize her friends about her. He found her in bed with all the symptoms of acute glaucoma. She had nausea, loss of vision in the left eye, increased tension and a dilated pupil. She had diagnosed her own case as one of iritis, as the symptoms were similar to an attack she had a year or so before. A Chicago oculist advised the use of atropin. Patient had lost the right eye some time before, as an iridectomy had been done, but without result favorable to vision. He at once prescribed for her, and in getting a more complete history of the case he was in some way impressed with the idea that she was suffering from an extreme case of autointoxication, suspecting the source to be the lower bowel. He gave his usual instructions to be followed in such cases, not waiting for the urinal test, which was carried out later on and confirmed his suspicions fully. Patient improved so rapidly, much more so than any case he had had under myotics, that he was surprised and wondered how much the autoinfection had to do with it. As soon as the patient was able to come to his office, he found vision 20/80 in this eye, a very little in the other or lost eye. In a very short time vision was 20/40, and came on rapidly to 20/20, and the near also became normal. The patient, after a year of treatment, considered herself cured. The treatment for the auto-intoxication was still continued, as it was impossible to cure a case of this kind of infection in a short

time. The bowel would take on a normal condition only after months on a very restricted diet and bowel flushings. Not enough time, he thought, had elapsed to make a positive statement, but of this fact he was sure, that in his twenty-five years of eye work he had not had such results as in this and the other three cases, so that he was justified in at least thinking very seriously of autointoxication as having something to do with the cause of glaucoma. He was led to this idea by his experience with a number of cases of irido-cyclitis and chronic cyclitis which he published two or three years ago.

Lastly, he stated that he absolutely would refuse to look after any patient who refused to follow his instructions absolutely, and it was only under this strict regimen that results could be accomplished.

### DISCUSSION

DR. J. A. PRATT, Aurora, reported a case due to infection outside of the bowel, showing that a patient may have glaucoma caused by infection. This patient was a man who lost one eye about 16 years ago, and 8 years thereafter he began to have attacks of iritis in the other eye a number of months apart. These attacks gradually became worse until he developed irido-cyclitis and later, after having had them for two or three years, off and on, he had an attack of glaucoma. Iridectomy was performed. Before this patient had his tonsils removed. The Wassermann and other tests were made with negative results. His bowels were looked after. He was not allowed to eat meat; he was not allowed to smoke; he stopped drinking, and each one of the attacks cleared up under Turkish baths and large doses of sodium salicylates, with eserine. The attacks continued after the iridectomy. Patient went for nearly a year without an attack, then he had two or three slight attacks. His teeth were x-rayed and trouble was found with a left central incisor, although it was the right eye that was affected. This tooth was extracted when he had an acute glaucomatous condition, which was controlled by eserine, and it was found that half of the root of this tooth had been absorbed. As soon as the tooth was extracted the patient was taken off of eserine. The second day thereafter his symptoms disappeared, and for the last six months he had not had any trouble. It looked to the speaker as if the trouble in this case originated from an abscess in the central incisor.

DR. VON DER HEYDT said that while hygienic measures were essential in the class of cases reported by Dr. Hawley, and a vegetarian diet could be advised, as advocated, he thought it was a therapeutic error to lay so much stress on these things and to exclude miotics in inflammatory glaucoma as had been done in one of the cases reported. He thought miotics were still the remedies par excellence.

DR. WILLIS O. NANCE said there was no doubt but what autointoxication figured to quite an extent in the causation of many eye diseases. He remembered that several years ago, when de Schweinitz first called attention to autointoxication in the causation of cases of iritis, he made it a point to go into the etiological factors of many eye diseases in relation to this condition, but was disappointed in the results. Recently, if he was not mistaken, de Schweinitz had backed down somewhat from his, at first, very enthusiastic idea of autointoxication as the cause of many eye diseases. He did not think Dr. Hawley would treat cases of acute glaucoma simply along the line of flushing out the bowel and the abolition of a meat diet. He certainly would do iridectomy just the same in cases of acute glaucoma because a delay of 24 hours in some of these cases meant destruction of the eyesight, yet the idea advocated was a good one on general principles. Most of the cases of glaucoma occurred in middle aged or elderly people, and the abstinence from a meat diet, with bowel flushings on general principles, was excellent treatment, but he did not believe the essayist would rely on this alone.

DR. THOMAS FAITH stated that evidence was gradually accumulating that some form of chronic intoxication was responsible

for glaucoma. He knew of two instances in which glaucoma had been relieved by getting rid of a focal infection.

DR. HAWLEY, in closing, said the object of his paper was not to bring out especially the fact that glaucoma was due entirely to infection from the bowel. That was only one source of infection, but that a large proportion of cases of glaucoma were due to infection somewhere. The speaker would not rely solely on treating these cases of glaucoma by bowel flushings. Miotics and other measures of treatment should be carried out as adjuncts. He ventured the assertion that 90 per cent. of practitioners did not know how to treat auto-intoxication. He knew of case after case where practitioners had absolutely failed to treat autointoxication successfully simply because they did not know how and because they did not insist on patients doing as they ought to do.

DR. HARRY S. GRADLE asked Dr. Hawley whether he had eliminated the possibility of a cyclitis precipitate on the pterior cornea, to which Dr. Hawley replied that he had not.

At the request of Dr. Nance, Mr. Hawley then detailed the instructions he gave these patients in addition to the bowel flushings.

### A CASE OF CHRONIC CONJUNCTIVITIS (PLASMA CELLULARIS).

Dr. Harry S. Gradle, in reporting this case for Dr. Bailey, stated that the patient was seen last year both by Dr. Suker and himself and pronounced plasma cellularis. A small piece of tissue was removed, a section made and examined. The case histologically was undoubtedly an instance of clinically atypical vernal catarrh. A blood count taken today showed eosinophilia slightly over 5 per cent. A smear taken from the conjunctival secretions showed no organisms, but an enormous number of eosinophils in the secretion. If this had been done previously they would not have thought it was a case of plasma cellularis.

In the conjunctivitis plasma cellularis was found. The blood picture showed leukocytosis. There might or might not be some plasma and mast cells, but there was a marked increase in the small mononuclear leukocytes, up to as high as 40 per cent.

The first of these cases was reported by Pascheff in 1908. Since then nine others had appeared in the literature. By some authors these cases of chronic conjunctivitis or plasma cellularis were regarded as a local manifestation of systemic infection, because in some of the cases reported there was febrile disturbance accompanying it; whereas, other authors regarded the disease as a local affair. The speaker was inclined to believe it was a local disease affecting the conjunctiva and its hematopoietic function. Treatment was not of much value. One case is reported by Elschnig as having been cured by the total excision of conjunctiva. In fact, in this case the local blood picture returned to normal, and the cicatricial or scar tissue that replaced the conjunctiva was no longer of the inflammatory type previously seen. According to the last reports of the patient he saw last year, the condition was unchanged. The boy had had the disease for four years before the speaker saw him, and probably it would continue for some little time. Dr. Lane, who made the histological examination, could tell the society more about the microscopic picture.

Dr. Francis Lane said he reported the microscopic findings in Dr. Gradle's case eighteen months ago, but

the findings in this case were different. The epithelium showed in places slight keratitis such as one would find on the papillæ of the tarsal conjunctiva. The case showed mucoid degeneration at the border of the knobs. One thing noticed in particular was an overdevelopment of the connective tissue of the substantia propria. He could not make out any hyalin degeneration because all connective tissue took practically the same uniform eosin stain. There were a few plasma cells, but no more than in the chronic forms of conjunctivitis.

One thing of interest about both of these cases was that it brought up the point of origin of the plasma cells. No cells in the conjunctiva had been discussed more than the plasma cells. But one investigator expressed the opinion that they were often of connective tissue origin. Later investigators, however, were of the opinion that they probably originated from the endothelial cells, such as the small or large round cell. There was very little proliferation or accumulation of small round cells of inflammation. The particular finding was an overdevelopment of connective tissue of the subepithelial structure. Many eosinophils were found in the tissue itself. This was the first thing he noticed in particular.

### TENSION IN NORMAL EYES BEFORE AND AFTER TONSILLECTOMY.

Dr. A. M. Carr stated that these observations on normal eye tension before and after tonsillectomy have been recorded in order to establish the effect that the hemorrhage, anesthesia and shock, which accompany that operation, as well as the removal of a focus of infection, have upon normal intraocular tension.

In a number of cases of iritis with secondary glaucoma observed at the Cook County Hospital it was noted that accompanying the improvement of the iritis, following tonsillectomy, there was a marked lowering of intraocular tension. This decrease in tension occurred within twenty-four hours after the removal of the tonsils and was permanent. There was satisfactory evidence to show that the reduction of tension was due to the improvement of the iritis dependent upon the removal of the tonsillar focus of infection as the tension remained unchanged in the eyes in which there was no iritis; nevertheless, it was thought advisable to study the effect of the above factors in normal eyes.

The material consisted of 100 cases of tonsillectomy in which there was no history of eye trouble. None but very controllable patients were used. Their ages ranged from 14 to 67 years. Pus could be expressed from the tonsil in practically every case. About two-thirds of the cases were operated under local anesthesia and the remainder with ether.

The Schiotz tonometer was used throughout and the eyes were anesthetized with holocain. The tension was taken first a few hours before the operation and then twenty-four hours after the operation.

No variation greater than 3 mm. was noted in 95 per cent. of the cases. This degree of variation was



of no significance, as all observers agreed that it was within the range of normal error and should be properly ascribed to the limitations of present day tonometry. In no case was there a variation of 5 mm. in the reading before and after the tonsillectomy.

Two cases had secondary hemorrhage with considerable degree of exsanguination. No difference was noted between the local and general anesthetic cases.

The average tension of the 100 cases was  $17\frac{1}{4}$  mm.; the lowest tension was 10 mm.; the highest tension 26 mm.

He, therefore, felt justified in concluding that in this series of cases tonsillectomy, even when accompanied with considerable hemorrhage, had no effect upon normal intraocular tension.

MAJOR H. WORTHINGTON,  
Secretary and Treasurer.

### CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held on Tuesday evening, May 22, 1917, at 7:30 o'clock in the south dining-room on the parlor floor of the Palmer House.

The president, Dr. Stanton A. Friedberg, in the chair.

#### *Presentation of Cases*

Dr. H. L. Pollock presented a boy of six years who had been referred to Dr. Joseph Beck, with a diagnosis of a papilloma of the larynx. When he was one year of age he became hoarse and gradually grew worse until he was three. He was then taken to a physician, who did a laryngotomy and removed a growth from the larynx, the nature of which was not known. Two weeks later he was taken back on account of difficulty in breathing and a second laryngotomy was performed. At this time there was so much difficulty in breathing that a tracheotomy was also done and a tube inserted. The boy had worn the tube until he was brought to them a few weeks previously, and it had been in his throat for a year without removal. (Exhibited photographs of patient with tube in position.) They (Drs. Beck and Pollock) removed part of the external papilloma and curetted the entire larynx. Two weeks later the balance of the papilloma was removed. The tracheotomy tube was left out and the patient observed; as the breathing was perfect, the tube was not replaced. They intended doing a plastic operation to close the tracheotomy wound. The patient's condition was very good and he was able to use his voice slightly.

*Note.*—(A plastic operation has since been done, closing the external tracheal opening, which healed promptly. The child was kept under observation for several weeks and as breathing was perfect and the voice returning, he was allowed to go home.)

#### DISCUSSION

Dr. A. H. ANDREWS said it was quite usual for papilloma in these young children to return. He thought it would be exceedingly fortunate if the tumor did not recur before the child was grown.

Dr. JOSEPH BECK thought there was a great difference in

the removal of a papilloma in former days by the indirect method and the method of suspension by which this work was done. This was not a simple papilloma; the histologic examination showed a great deal of granulation tissue.

Dr. POLLOCK, closing, said that over two years ago they had a similar case from the same city in which the same operation was performed. They removed the growth by means of the suspension method and the voice was much better. In the two years since the operation there had been no recurrence in that case.

#### *Program*

Dr. Stanton A. Friedberg read a paper entitled FOREIGN BODIES IN THE ESOPHAGUS: AN ANALYSIS OF FIFTY CASES.

Dr. Friedberg discussed the symptoms, diagnosis and treatment of foreign bodies in the esophagus. He gave in detail the analysis of fifty cases, with the problems and results connected with their removal.

#### DISCUSSION

Dr. ROBERT CLYDE LYNCH (New Orleans) stated that his experience in extracting foreign bodies had been similar to that of Dr. Friedberg in all instances. About three weeks ago he had had the unique experience of seeing into the mediastinum through the esophagus of a child three-and-a-half years old who had swallowed lye, which had produced a perforation of the esophagus. Through the perforation he was able to recover from the mediastinum a pint of fluid, water, etc. The child lived for about six hours and died from the infection of the mediastinum.

He believed that in about five per cent of the cases he had seen with foreign bodies in the esophagus the smooth ones would go through; rough, sharp-edged bodies stop behind the cricoid, while meat balls land at the cardiac end of the esophagus. He cited the case of a physician who, in attempting to eat chicken, was unable to grind the shreds into small bits and got a ball of undigested chicken at the cardiac end of the esophagus, which it took an hour or more to remove. Crab shells very often land in the esophagus and have the peculiarity of producing no obstruction to the swallowing of either fluids or solids. He reported five cases in which there had been no difficulty in and in which he recovered the shell, but in many instances it was necessary to break the shell into fragments before it could be removed so as not to traumatize the parts. In some of the cases the suspension apparatus had served them very well in this connection.

The speaker thought the symptoms of the presence of foreign bodies in the esophagus were very misleading to a man who had no experience with these cases, for many of them give no obstruction to swallowing, simply producing an increase of secretion of the mucous membrane of the upper portion of the esophagus and a slight irritation from this which overflows from the esophagus into the larynx and worries the patients because they have to cough to get rid of it. He believed that where there was any history of swallowing a foreign body that was sufficient to demand an examination of the esophagus for its presence or absence.

Dr. NORVAL H. PIERCE said he had a great sense of comfort in knowing that Dr. Friedberg was living in Chicago where he could be called upon at any time for his special skill. He had seen him work and knew his work was as good as anyone's in the country.

The last case Dr. Pierce has been called upon to examine was one at St. Luke's Hospital, a Belgian refugee who came with the history of having got a foreign body in the throat during a meal composed largely of Illinois chicken. She complained of great pain, but was of rather a neurotic type and had undergone a great deal of suffering in her native country. There was nothing to indicate anything in the esophagus except the pain on swallowing. He saw her in the office late in the afternoon, sent her to St. Luke's and saw her there in the evening after x-rays had been taken. The pain was in the region back of the cricoid cartilage, but nothing showed in the radiograph. There was a shadow, but the x-ray man was not positive whether it was a foreign body or the cartilage of the larynx. On going to the hospital the following morning he found that the patient

had left, having coughed out a triangular-shaped piece of bone, the base of which would perhaps measure an inch and a half. He cited this case simply to accentuate the fact that one cannot depend upon any symptom as pathognomonic of a foreign body in the upper part of the esophagus, nor can one depend always upon the x-ray. He believed that when a patient had swallowed a foreign body the best plan was to search for it, but he had seen a great many cases where nothing had been done and the symptoms had all disappeared within the course of a few days. He thought the safest course was to search for them rather than allow them to go until inflammation occurred and caused increased difficulty in removing the foreign body.

Dr. FRIEDBERG, closing, emphasized the necessity of always making a careful examination, stating that it is extremely difficult to determine whether anything is present or not. In the soft tissue swelling occurs rapidly and hides the foreign body, so it is likely to be overlooked. As to the time that should be spent in looking for a foreign body, he considered anything over half an hour in a child or young person harmful, believing that it was better to make a short examination and repeat it later, if necessary, as they could not stand the shock well.

Dr. H. L. Pollock read a paper entitled

#### SUSPENSION LARYNGOSCOPY.

Dr. Pollock called attention to the fact that this method has been very much neglected in the hands of the otolaryngologists throughout this country. When one considers the great advantages of this method of doing intralaryngeal work, either diagnostic, medical or surgical, over the indirect method, it is scarcely conceivable that so few laryngologists are familiar with the technic which is so easily performed with such simple apparatus and instruments.

In 1915 Dr. Pollock's associate, Dr. Joseph C. Beck, read a paper giving their experience in over 200 cases where suspension had been employed. Since then they have had many more. At that time he cited several conditions in which suspension was impossible, but since then Dr. Lynch and others have greatly improved the technic and some of these objections and difficulties have been overcome.

He gave the indications for the use of suspension as follows:

1. Carcinoma.
2. Adenocarcinoma.
3. Papilloma.
4. Fibroma.
5. Angioma.
6. Syphilis.
7. Tuberculosis.
8. Rhinoscleroma.
9. Cicatricial stenosis.
10. Paralysis.
11. Foreign bodies.
12. Burns.
13. Asthma.
14. Post-Traumatic tracheal stenosis.
15. Bronchiectasis.
16. Suction of secretion for bacteriologic examination.
17. Direct intubation.
18. Simple laryngitis.
19. Post typhoidal chondritis.
20. Atrophic laryngotracheitis.
21. Hysteric aphonia.
22. Suspected thymus enlargement.
23. Tracheal compression by thyroid enlargement.

24. Aortic aneurysm.

25. Normal cases.

General anesthesia is necessary in children and infants, and is given either by the blowing vapor method through the mouth or through the tracheotomy tube, if such was previously necessary. In practically all adults local anesthesia sufficed, but in a recent case, notwithstanding a perfect local anesthesia, suspension could not be performed and a general anesthesia was resorted to. By using pure flakes of cocaine instead of the former 20 per cent. solution, the gagging and irritability has been practically eliminated. In some cases as much as four grains of cocaine was used, and they have never observed the slightest toxic results.

(To be continued)

#### DE KALB COUNTY

The regular meeting of the DeKalb County Medical Society was held in the Odd Fellows Building, DeKalb, October 26, 1917. Dinner was served to the members by the Society at 12 o'clock, after which the business for the day was taken up.

The President not being able to attend, and the Vice-President's chair vacant on account of the recent death of Dr. M. C. Munn of Sycamore, Dr. T. S. Carpenter of Hinckley took the chair. The secretary read the minutes of the April and June meetings, which were approved. Dr. C. B. Brown, delegate to the State Society, gave an interesting report on the same.

As this was the last meeting for the year, the following officers were elected for 1918: President, Dr. Clifford E. Smith, DeKalb; Vice-President, Dr. J. B. Hagey, DeKalb; Secretary and Treasurer, Dr. L. E. Barton, Malta. Dr. Carl H. Milkkinson of Waterman was elected to act on Board of Censors for three years. Dr. C. B. Brown was reappointed delegate and Dr. J. A. Badgley alternate delegate to the State Society meeting for the ensuing year.

J. B. HAGEY, Secretary.

#### FULTON COUNTY

The twentieth annual meeting of the Fulton County Medical Society was held in the Y. M. C. A. Auditorium at Canton, Oct. 9, 1917, and was called to order at two p. m. by President Simmons.

The following officers were elected: President, W. L. Crouch, Fairview; first vice-president, E. P. Coleman, Canton; second vice-president, Jennie W. Parks, Cuba; secretary-treasurer, D. S. Ray, Cuba; necrologist, R. H. Stoops, Ipava; membership committee, L. R. Chapin, Canton; board of censors, J. W. Welch, Cuba; delegate to state meeting, J. C. Simmons, Norris; alternate, P. S. Scholes, Canton; legislative committee, W. E. Shallenberger, Canton; public health, C. D. Snively, Ipava.

Drs. Vern Hays and J. M. Nellis of Canton and R. G. Taylor of Table Grove were elected to membership.



Necrologists' report on the death of Dr. Blake E. Ray was read, accepted and placed on record.

On motion of Drs. Shallenberger and Stoops, Dr. C. N. McCumber of Lewistown was recommended as County Medical Director on the Tuberculosis War Problem Committee.

Dr. D. J. Davis of Chicago gave a paper on "The Relation of Lower Animals to Human Disease."

Dr. S. A. Falls of Chicago presented "Some Phases of Vomiting of Pregnancy and the Management of this Condition."

Drs. Stoops and Gray moved a vote of thanks to Drs. Davis and Falls. Motion carried unanimously.

Eighteen members and three visitors were present.

A bountiful dinner was served at six o'clock by the ladies of the Congregational Church, after which a pleasant hour was had in short talks, recitations and music.

D. S. RAY, Secy.

### LA SALLE COUNTY

The sixty-fifth annual meeting of the La Salle County Medical Society was held at La Salle, Ill., Tuesday, October 16, 1917, at 10:30 a. m., in the Public Library.

#### PROGRAM.

10:30 A. M.—General business, election of officers, etc. President's address, Dr. A. J. Werick, Marseilles.

Address, Dr. F. C. Dayas, Chicago.

"Orodopedic Aspects of Poliomyelitis," Dr. E. Ryerson, Chicago.

"Benign Tumors of the Rectum," Dr. Chas. J. Drueck, Chicago.

"Mastoid Disease as Treated by the General Practitioner," Dr. Ralph H. Woods, La Salle.

Posterior-Gastroenterostomy Operation (shown by moving picture), Dr. H. M. Orr, La Salle.

Peru, Oglesby and La Salle physicians entertained the La Salle County Medical Society at a dinner at the Hotel Kaskaska.

The following officers were elected for 1918: President, Dr. Geo. K. Wilsen, Streator; Secretary and Treasurer, Dr. E. E. Perisho, Streator.

### MADISON COUNTY

The Madison County Medical Society met at the Firemen's Hall in Madison, Ill., on October 5, 1917. In the absence of a presiding officer, Dr. W. H. C. Smith, of Godfrey was called to the chair. Twenty-two members present. The committee to draft resolutions on the death of Dr. J. Morgan Sims made a report which was adopted. By motion this report was ordered to be spread upon our records and a copy sent to the family. The secretary gave notice that he would be unable to take charge of the Red Cross Seal campaign for this year and a committee consisting of Fiegenbaum, Barnsback and Ferguson was appointed to secure a sales manager, with power to act.

The committee on devising a plan to safeguard the interests of our members while absent on duty for the nation made report through the chairman, Dr. Ferguson, and on motion of Dr. J. W. Scott, a vote of thanks

was tendered to the committee and the committee discharged.

Dr. J. W. Baker reported that Dr. Ralph B. Scott of Venice, was accused of violating the provisions of the Harrison Act and a committee consisting of Drs. Burroughs, Barnsback and Baker was appointed to look after the interests of Dr. Scott in behalf of the society.

The speaker of the day, Dr. Louis Hemplemann, was introduced who gave an address on "Artificial Pneumothorax: The Treatment for Pulmonary Tuberculosis." He reported splendid success in many cases so far advanced that other treatment was of no avail. He advocated this procedure in advanced cases and also in pulmonary hemorrhage. He exhibited an appliance by which gas or air could readily be introduced into the pleural cavity and also said that he had abandoned the use of gas in all cases and was now using only filtered air.

A vote of thanks was tendered the speaker, after which the society adjourned to meet in Edwardsville on the first Friday in November.

### MONTGOMERY COUNTY

The September meeting of the Montgomery County Medical Society was held at Witt, Tuesday evening, September 18.

Dr. Everett read a paper on "Hay Fever." Because of his experience with the disease he has kept himself well posted on everything written on the subject for many years and his paper was, as expected, a very interesting review.

Dr. C. W. Vaughn, formerly of Bond County, but now of Nokomis, was voted a member of the society. Dr. Vaughn has taken up the practice of Dr. Tupper, who expects to enter the army service.

It was unanimously voted at the meeting that the society pay the dues, during the period of the war, of all members in good standing who are in army service.

### PIKE COUNTY

The Pike County Medical Society met in Pittsfield, October 25, 1917, and, notwithstanding the disagreeable weather, there was a fair attendance. Four new members were voted into the society, which makes seven additions in the past year. This certainly indicates an appreciative interest in organized medicine and a hopeful outlook for the future when one county society increases by practically 20 per cent. in one year. The new members are: Drs. J. T. Doss, Milton; C. E. Thurmon, Milton; J. W. Dinsmore, Nebo, and C. E. Gose, Kinderhook.

A letter from Dr. W. H. Gilmore, secretary of the State Society, was read relative to the First Aid courses of instruction for the Red Cross and examiners for same. It was moved and carried that the local doctors of the various communities act as such and be selected by the president and secretary of the society.

The generous offer of the University of Illinois to supply lectures to the society was much appreciated, but action was deferred for the present.

Dr. E. L. Crouch of Jacksonville presented a very

interesting and instructive paper on "Splanchnoptosis." Dr. H. A. Chapin, also of Jacksonville, exhibited some splendid X-ray plates, illustrating Dr. Crouch's paper, which enhanced very much its instructive interest. The society was disappointed that these doctors could not entirely cover the field on account of having to catch a train.

W. E. SHASTID, *Secy.*

---

## Personals

---

Dr. James A. Day, Jacksonville, announces his removal to Springfield.

Dr. Max C. Hawley, Elgin, has been appointed superintendent of the Watertown State Hospital.

Dr. Marguerite G. Squires, Carrolton, has been appointed county physician of Grundy County.

Dr. Emil Bunta, Chicago, has been appointed a member of the staff of the Oak Forest Infirmary.

Dr. B. H. McKinney, of New Douglas, has gone to Arcadia, Florida, to spend the winter.

Major William J. Swift, M. C., has been appointed director of Illinois field hospital companies at Camp Logan, Houston, Texas.

Dr. James M. Neff, who was on duty with the Murphy Unit in Europe for several months, has returned and resumed practice.

Dr. and Mrs. S. T. Robinson, of Edwardsville, after spending the summer in Colorado and Colifornia, have returned home.

Drs. William E. Buehler and Andrew M. Harvey, Chicago, have been elected directors of the public safety commission in Cook County.

The wife of Dr. H. Wernicke Gentles, Chicago, disappeared from her home, October 20, while suffering from melancholia, and her body was found in Lake Michigan the next day.

Dr. Norman Bridge of Los Angeles, recently associated in the war activities of the U. S. Association of Commerce in Washington, attended the banquet to Dr. Billings.

Dr. John J. McShane of the state board of health is investigating conditions in Edwardsville where twenty-five cases of diphtheria have occurred, with one death.

Dr. Cassius C. Rogers has been commissioned major, and Dr. J. Lloyd Hammond, lieutenant, in the Medical Corps, Illinois National Guard, and assigned to the First Reserve Infantry.

Dr. Maurice L. Blatt has been commissioned major, Dr. Arthur H. Parmelle, lieutenant, in the Medical Corps, and assigned to duty with the Second Illinois Reserve Infantry.

Col. C. U. Derele, survivor of ninety-seven wounds received in the medical service of France, represented France at the meeting of the Clinical Congress of Surgeons.

Relatives of the late Dr. E. Iles Kerlin, Chicago, are attacking his will, which left the bulk of his fortune of \$80,000 to Earlham College, Richmond, Ind.

Captain Albert A. Ankenbrandt, M. C., of Mount Carmel, has been ordered to report for service at the base hospital of Camp Zachary Taylor, Louisville, Ky.

Dr. Edmond L. Brunswick has recovered from a severe pistol wound inflicted by his wife, October 16. The doctor was a temporary medical inspector of the Chicago Department of Health.

Dr. Rosalie Slaughter Morton of New York lectured, Oct. 22, at the University of Illinois College of Medicine on "My Six Months Medical Service in Serbia."

Dr. George Parker, medical director of the Peoria Life Insurance Company, has entered on the duties of commissioner of health of Peoria, succeeding Dr. Emmett A. Garrett, called to war service.

Dr. Phelps of Lemmon, S. D., attended a patient thirty-four years ago when a resident of Elizabeth, Illinois, and he has recently been notified that the patient, James McMan, has bequeathed him \$50,000.

Sir Berkeley Moynihan, Colonel and Chief Surgeon of the British Army Medical Service, took a prominent part in the Clinical Congress of Surgeons' meeting, as representative of the British medical service.

Dr. James A. Day, formerly of Jacksonville, where he conducted a private surgical hospital for several years, has recently opened an office in the Leland Annex Building, and will continue the practice of general surgery.

Surgeon-General William C. Gorgas of the U. S. Army, William C. Braisted of the Navy and Rupert Blue of the Public Health Service, represented the Government at the Clinical Congress of Surgeons.



Major Harry D. Orr, M. C., assigned to the One Hundred and Twenty-Second Infantry, has been appointed director of Illinois Field ambulance companies. Capt. Robert J. Gay has succeeded Major Orr as regimental surgeon.

Drs. Carl E. Black, Jacksonville, James F. Percy, Galesburg, Clifford U. Collins, Peoria, and J. W. Pettit, Ottawa, were among the throng that honored Dr. Frank Billings at the Auditorium, November 1.

Dr. Alice Barlow Brown, Winnetka, has arrived at Toulouse, France, where she is to establish a free dispensary for women and children which is supported by the women of Winnetka, and the American Fund for French Wounded.

Dr. Fred M. F. Meixner has been appointed medical director of the new Peoria Municipal Tuberculosis Sanatorium, and assumed his duties October 1. The building under construction will be finished about March 1, and in the meantime patients will be cared for in the pavilions now open on the grounds.

Dr. E. B. Coolley, president of the Illinois Medical Society, has recently returned from Washington, D. C., where he attended, as an invited guest, the celebration of the one hundredth anniversary of the District of Columbia Medical Society. Our State Society and Dr. Coolley were honored by that Society in having our president address the doctors attending the banquet that night.

Dr. Effie L. Lobdell, Chicago, visited Washington in the interest of a complete registration of women physicians and organization to secure the greatest efficiency in both war and peace medical work. Other physicians interested in the plan include Dr. Bertha Van Hoosen, Dr. Lindsay Wynekoop, Dr. Mary L. Hanks, Dr. Julia Strawn, Dr. Louise Acres, Dr. Alice Conklin, Dr. Sadie Bey Adair, Dr. Harriet Alexander, Dr. Anna Dwyer, Dr. May Cushman Rice, Dr. Ethel Rice, Dr. Clara Ferguson, Dr. Clara Seippel and Dr. Mary E. Kearsley.

The following commissions of Illinois physicians were announced last month:

Captain Harry S. Gradle, Chicago, assistant to divisional surgeon, Lieut.-Col. Phelan, Camp Grant.

Major William S. Baum, Chicago, base hospital, Camp Grant.

First Lieutenant W. J. Rideout, Freeport.

First Lieutenant Orlando M. Gochnaur, Freeport, now with an American hospital unit in France.

First Lieutenant H. L. Kampen, Monmouth.

First Lieutenant H. S. Zimmerman, Cameron.

First Lieutenant G. A. Longbrake, Galesburg.

First Lieutenant C. J. Johnston, Canton.

First Lieutenant T. D. Cantrell, Bloomington, has been assigned to x-ray work at the Cook County Hospital.

Captain William Fuller, Chicago, has been ordered to report at Camp Pike, Little Rock, Ark.

First Lieutenant Clarence M. Cheadle, Chicago, was ordered to take three months training in tuberculosis work and assigned to Fort Benjamin Harrison.

First Lieutenant Peter T. Spurck, Peoria, has been assigned to Fort Oglethorpe, Atlanta, Ga.

The following assignments were made November 3:

Eight medical reserve officers were assigned to Chicago by the war department today for a course of intensive training in brain surgery at the Neurological school, Presbyterian Hospital. They are:

Maj. James F. Corbett; Capt. David O. Thomas. First Lieuts. Ernest W. Downton, Wellington A. Lebkicher, Thomas P. Martin, William J. Potts, Fred L. Patterson, and Samuel Zielonka.

First Lieut. Arthur E. Rogers, medical reserve corps, was assigned to the county hospital at Chicago for a course in military Röntgenology.

Maj. James E. Abbott, infantry, national army, was assigned as major of the Three Hundred and Sixty-fifth infantry, Ninety-second division, at Camp Grant.

Temporary Second Lieut. Leo. J. Stein was assigned to duty with the Thirty-fifth engineers at Camp Grant.

First Lieut. Julien E. Benjamin, ordered to Camp Dodge, Des Moines, for duty at the remount station.

First Lieut. Carl E. Wismer, sanitary corps, national army, was assigned to duty at the plant of the General Motors Truck Company at Pontiac, Mich.

Acceptance of the resignation of First Lieut. George C. Booth, dental corps, Illinois National Guard, was announced by the War Department.

The following commissions in the Officers' Reserve Corps were made November 3:

The medical and dental reserve officers will be assigned to the national guard camps and national army cantonments in the central department and will accompany troops of these divisional camps to France. Some of the officers commissioned, however, will be assigned to base hospital units sent to France in advance of the men in camps.

The men receiving commissions are—captains, medical corps:

Harry H. Emerson, 1225 West Garfield avenue.

Alexander R. Craig, 535 North Dearborn street.

John S. Sweeney, Palmer House.

First lieutenants, medical corps:

James Henry Bloomfield, 4700 Cottage Grove avenue.

Edward A. Corcoran, 3159 Jackson boulevard.

Linell L. Rodgers, 526 East Bowen avenue.

Harry A. Dimon 3100 South Wentworth avenue.

Lamot W. Rosenbaum, 7236 Cottage Grove avenue.

Lester L. Long, 5621 Calumet avenue.

Israel Sherry, 6158 North Clark street.

Joseph L. Hagan, 1900 Central street, Evanston.

Cyril James Larkin, Mercy Hospital.

S. H. Kraft, 125 East Chicago avenue.

Clarence A. Jacobson, 2931 West Adams street.

George W. Cusick, Chicago Heights.

Andy M. Carr, Cook County Hospital.

Thomas Oliver Greig, West Chicago.

Sydney S. Schochet, Marshall Field Annex building.

James E. McNeel, 5744 Stony Island avenue.

K. P. Frost, 25 East Washington street.

Vincent F. Keller, 7046 South Racine avenue.

Hart E. Fisher, 72 West Adams street.

Walter W. Hamburger, 104 South Michigan avenue.

Edwin F. Hirsch, Ricketts building, University of Chicago.

Charles A. Burkholder, 108 North State street.

Herbert V. Mellinger, Wilmette, Ill.

John O. Gaston, Park Ridge, Ill.

## News Notes

—The Illinois State Hospital Medical Association will meet at the Lincoln State School and Colony, Lincoln, Illinois, November 22 and 23.

—The Illinois Masonic Hospital Association will attempt to make any Masons physically fit who may be wounded or rejected by the military authorities.

—The alleged German plan to mate people "regardless" to repopulate their decimated cohorts, is meeting with abhorrent denunciation of right thinking people everywhere.

—The United States Civil Service Commission desires the widest publicity for the war need of the Government for stenographers and typewriters on account of the unusual demands of the service.

—At a special meeting of the Rock Island County Medical Society, held in Rock Island, September 27, the essayist of the evening was Dr. Edward C. Rosenow, Rochester, Minn., who spoke on "Infantile Paralysis."

—A case of glanders is said to be under treatment and in strict quarantine in St. Luke's Hospital. The disease is presumed to have had its source in the barns of an express company where five horses suffered from the disease.

—Miss Elizabeth Wallace left Chicago, October 15, for France as a member of the Tuberculosis Commission headed by Dr. Livingston Farrand, president of the University of Colorado, and secretary of the National Association for the Study and Prevention of Tuberculosis.

—An urgent appeal to raise \$15,000 has been made by the trustees of the Provident Hospital, which was founded in 1896 for the care of colored sick and injured in Chicago. On account of shortage of funds the free dispensary of the institution has been forced to close its doors.

—At the November election, the people of Cook County will be asked to approve a bond issue of \$1,000,000 for the erection of two hospitals as branches to Cook County Hospital. The first, to accommodate 200 patients, is asked for



South Chicago, and the second, in the stock yards district, is intended as an emergency hospital.

—The Clinical Congress of the American College of Surgeons adopted the above title at their recent meeting and elected the following officers: President, Dr. W. J. Mayo, Rochester, Minn.; vice-presidents, James B. Eagles, Seattle, and F. N. G. Starr, Toronto; secretary-general, Franklin Martin; secretary, Allen B. Kanavel; treasurer, A. D. Ballou.

—Nine physicians of Murphysboro, including members and officers of the Jackson County Medical Society, published a declaration that they are attending the patients of others serving in the army and turning over half the fees. They also warn outside physicians from locating in Murphysboro during the absence of those in the army service, but promising to welcome any newcomers after the war.

—Two special clinics were given, October 12 and 13, at the Chicago Municipal Tuberculosis Sanatorium by Dr. H. Kennon Dunham, Cincinnati, who spoke on "The Interpretation of Roentgen-Ray Photographs of the Lungs in Tuberculosis," and by Dr. William Snow Miller of the University of Wisconsin, Madison, who spoke on "The Anatomy of the Lungs." The clinics were attended by present and former members of the staff of the sanatorium and its dispensary, and by the class of the Chicago School of Military Roentgenology.

—Surgeon-General Fotheringham of the Canadian Army addressed the Institute of Medicine of Chicago on Friday, November 2, 1917, in the LaSalle Hotel, at 8 p. m. Surgeon-General Fotheringham went to France in 1914, with the first Canadian contingent, and was in active service in France with the Canadian forces until April of this year, when he was promoted to the Department of Militia and Defense, Ottawa, as Surgeon-General of Canada.

The subject of his address was "Modern Methods in War from a Medical Standpoint."

—The Federal Trade Commission October 30 issued regulations under which American manufacturers may use about 20,000 enemy-owned patents and copyrights. This will enable American firms to make salvarsan and other chemicals that have been practically out of the market for some time. The prices may also be regulated if

competition is not sufficient. The following representatives of the Government and chemical interests were in conference with the commission, with Commissioner John Franklin Fort presiding: Julius Stieglitz of Chicago, president of the American Chemical Society; Oscar G. Ruge, assistant surgeon, U. S. N.; Major Victor C. Vaughan, surgeon, U. S. A.; J. W. Kerr, United States public health service; Marston T. Bogart of Washington, representing the Council of National Defense, and Dr. G. W. McCoy of Washington.

—The Vermilion County Medical Society has adopted the following resolution to be presented to the city council at its next regular meeting:

WHEREAS, reports from the warring nations shows that half the incapacitated soldiers returning from the front are suffering with tuberculosis; and,

WHEREAS, the National Council for Defense is demanding vigorous local action on our part, to meet this war condition; and,

WHEREAS, already fifty-two of our citizens have died of tuberculosis this year, and some forty have been discovered in a two weeks' survey; and,

WHEREAS, tuberculosis is preventable, and a curable disease in the early stages under proper care and supervision; and,

WHEREAS, early diagnosis and effective sanitation and isolation are the most essential factors in the prevention and cure of this disease. Therefore, be it

*Resolved*, That we, the Danville members of the Vermilion County Medical Association do hereby petition the Honorable Mayor and City Council to appropriate from the Tuberculosis Sanitarium fund created for the prevention and cure of tuberculosis, a sum sufficient to maintain a tuberculosis dispensary with a paid medical director and visiting nurse service.

## Marriages

JOSEPH FLORIAN KONAPA, M.D., to Miss Marie Kasperek, both of Chicago, in August.

EERKO SAMUEL AEILTS, M.D., Forreston, Ill., to Miss Grace Engle of McKee, Ky., August 18.

CHESTER HENRY KEOGH, M.D., Chicago, to Miss Katherine Knapp of Portland, Ore., August 9.

JACOB RICHTER BUCHBINDER, M.D., Chicago, to Miss Hazel H. S. Felman of Joliet, Ill., in Chicago, September 27.

LIEUT. JACOB A. GOODMAN, M. R. C., U. S. Army, to Miss Ida E. Ginsburg, both of Chicago, September 26.

## Deaths

LOGAN COX, M.D., Hallidayboro, Ill.; University of Tennessee, Nashville, 1882; aged 55; died in East St. Louis, Ill., August 9.

WILLIAM PATRICK HONAN, M. D., Chicago; Bennett Medical College, Chicago, 1914; aged 30; died at his home, October 25, from heart disease.

DR. CHARLES CUMMINS HUNT, M. D., Bellevue Hospital Medical College, New York City, 1865, died in Seattle, Wash., September 9, 1917; aged 76. Former resident of Dixon, Ill., where he practiced fifty years.

JAMES F. BLACKWELDER, M. D., Litchfield; Cincinnati College of Medicine and Surgery, Cincinnati, 1864; aged 76; a veteran of the Civil War, medical staff; a prominent citizen and physician of Litchfield, an honorary member of Montgomery County Medical Society; died at his home, October 9.

NICHOLAS SOTERIADES, M.D., Waterloo, Ill.; University of Munich, Bavaria, 1876; aged 70; died at his home, September 19, from myocarditis.

EDWARD WILLIAM BUHRMASTER, M.D., La Harpe, Ill.; St. Louis College of Physicians and Surgeons, 1905; aged 37; who went to Colorado on account of his health; died in Colorado Springs, September 17.

NORA SOULE DAVENPORT, M.D., Rover Forest, Ill.; Northwestern University, Women's Medical School, Chicago, 1889; aged 72; a Fellow of the American Medical Association; died at her home, October 7.

FRED C. DICKSON, M.D., Danville, Ill.; Indiana Medical College, Indianapolis, 1906; aged 36; formerly a Fellow of the American Medical Association; died in the Glen Rest Sanitarium, near Columbus, Ohio, September 20.

ANDREW BAXTER MILLER, M. D., Chicago; College of Physicians and Surgeons, Chicago, 1898; aged 45; a Fellow of the American Medical Association; professor of clinical gynecology in the Chicago College of Medicine and Surgery; died in his office, October 19, from heart disease.

CHARLES J. OCASEK, M.D., Chicago; Rush Medical College, 1893; aged 47; a well known Bohemian physician; while crossing the street, September 27, was struck by a street car and died in the ambulance while being taken to the hospital.

JESSIE B. PIERCE GARWOOD, M.D., Princeton, Ill.; State University of Iowa, Iowa City, 1888; aged 59; formerly a Fellow of the American Medical Association; a member of the Illinois State Medical Society; died at her home, September 12, from diabetes.

CARL OSCAR BERNHARDI, M.D., Rock Island, Ill.; Rush Medical College, 1902; aged 37; a Fellow of the American Medical Association, and a well known surgeon of Rock Island, who had been suffering from heart disease for six months; died in the Presbyterian Hospital, Chicago, October 8, from lobar pneumonia.

BRENT L. BARKER, M.D., Monticello, Ill.; Louisville (Ky.) Medical College, 1897; aged 46; formerly a Fellow of the American Medical Association; a member of the Illinois State Medical Society; once secretary of the Piatt County Medical Society; local surgeon of the Illinois Central Railroad; died at his home, September 29.

## Book Notices

THE MEDICAL CLINICS OF NORTH AMERICA. Volume I, No. II (The Philadelphia Number, July, 1917). Octavo of 269 pages, 28 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published bi-monthly. Price per year: Paper, \$10.00; cloth, \$14.00.

This number of the Medical Clinics contains the names of the most prominent of Philadelphia clinicians as contributors. All the clinics are practical as well as scientific. It is one of the best numbers we have seen. As a means of post-graduate study at home these clinics should prove exceedingly useful.

THE SURGICAL CLINICS OF CHICAGO. Volume I, Number IV (August, 1917). Octavo 206 pages, 70 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Published bi-monthly. Price per year: Paper, \$10.00; cloth, \$14.00.

Many exceedingly interesting cases are presented in the present volume. Fifteen clinicians are represented with about thirty-four various subjects. Barring a few rarer cases, most of its pages are given to subjects more commonly met with by the surgeon. As a means of learning the views and technique of the contributors, the clinics fulfill their object.



# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. XXXII

CHICAGO, ILL., DECEMBER, 1917

No. 6

## Original Articles

### CONSERVATION OF MATERNAL NURSING.\*

GEORGE EDWIN BAXTER, M. D.,  
CHICAGO, ILL.

The object of this paper is to review a most important subject and emphasize certain features which experience has shown are important in preserving breast food. There can be no doubt but that the study and care necessary to conserve mothers' milk has been neglected by the physicians. That the breast milk is the ideal and natural food for the infant admits of no opposition, or even discussion. The recognition of this fact is proven by the almost universal advice that the babe should nurse its mother. In conceding the universality of this opinion one must distinctly qualify its acceptance and application as being acted upon in a desultory fashion.

The doctor has by no means fulfilled his duty to his patient, when he discharges from his mind his responsibility toward the maternal nursing of the infant by the statement "that the baby must nurse the breast." It is important and necessary that this advice should be applied directly to the individual infant in hand. The study of the associated conditions and the detail of care must occupy a prominent place in the instructions given to the mother.

A further reason for the presentation of this subject lies in the high percentage of unnecessary weanings from the breast in the early weeks of infant life. The advice is given in my judgment many times not necessarily from the lack of knowledge, but from carelessness and indifference to the possibility of preserving the breast milk for the infant.

It is a familiar experience in practice to be frequently called by a young mother who is

filled with fright, anxiety and ignorance, when suddenly she finds herself, after her obstetrical nurse has gone, the sole guardian of and responsible for the life of the helpless, crying infant. The mother telephones her physician; she is greatly alarmed. The physician is busy and is content to reassure her that the child has the colic, and orders a dose of castor oil. A repetition of this, or similar experiences, with an ever increasing anxiety, fatigue and loss of sleep on the part of the mother, and certain helplessness on the part of the physician, creates a vicious circle. To meet this condition is the ready and ever present advice of the friends and relatives that the breast milk is disagreeing with the child. The doctor is overwhelmed with all this evidence and is soon drawn in with the majority and the breast milk is lost for the babe.

*Periods of Nursing.*—Arbitrarily we may divide maternal nursing into three periods: First, the first two months of life; second, the third, fourth, fifth and sixth months; third, the seventh, eighth and ninth months. The first period demands the most careful consideration. If the breast milk can be maintained through this period, usually the infant will go through the second period with but little disturbance. The third period is important since it is common for many infants to cease thriving on breast milk alone, and during this period are to be found the beginning of many of the chronic nutritional disturbances.

A large percentage of infants after the sixth to the eighth month do not thrive properly when fed exclusively on breast milk. This percentage is greatest not only among the more highly organized members of society, but it also holds true among a large class of women whose nervous systems are not so highly susceptible. Chronic nutritional disturbances of a mild or severe character are commonly seen during this stage when the infant has received none other than breast milk.

\*Read before the Chicago Medical Society Meeting, June, 1917.

It is, therefore, imperative that the breast feeding after the eighth or ninth month should be of secondary importance in developing the proper balance in the infant's nutrition.

*Nursing During the First Period.*—This is the most valuable period to the infant, even a few weeks of breast feeding if properly directed will furnish a good nutritional basis for either supplemental or substitute food in case sufficient breast milk is not to be obtained. The first period is likewise the most serious time, especially for the mother with her first infant. Other children are spared the trials, discomforts and tribulations that beset the early life of the elder child, because the history usually shows that the mother nursed all but the first infant.

*Factors of Importance.*—The laboratory analysis of breast milk has much less importance than formerly. The determination of its chemical composition is rarely needed in my experience. Occasionally it is advisable to have the milk examined, but it is of little consequence to the infant or the mother that the milk gives a perfect analysis if the baby is not thriving. Likewise it is of no importance if a slight variation in fats, carbohydrates or proteids is found, providing the baby is thriving.

The influence of environmental conditions is a factor of great importance and one too often neglected. A study of extraneous influences upon the production of mother's milk, reveals the necessity for the most careful attention to detail and of giving the most explicit directions for management.

To one who has given special study to this subject, it is known that the infant during the first period is a direct barometer of the mother's condition, especially as relates to her general state of health and her nervous and mental equilibrium.

The environmental factors which influence the quality and quantity, physical and chemical properties of the mother's milk are numerous. Most prominent among these are home conditions. This does not refer to position of affluence, but rather to those conditions which are directly responsible for domestic tranquility, in which the grandmother, the aunts, the sisters, friends, and lastly, the husband, may play no unimportant part. Any or all these may exert a tremendous influence upon an emotional or

neurotic mother, susceptible as she is at this time, causing her to allow her anxiety to supersede her judgment. Mothers, usually, if left alone, display much better management than they do when influenced by women of large experience in raising a family. I am aware that these influences may be much greater than the influence of the doctor, but I plead for more strenuous persistence on the part of the physician to gain control of such a situation for the preservation of good food for the new born infant. General regularity of the habits of the nursing mother, her exercises, and care of nipples should all receive careful attention.

Considerable difference of opinion has been expressed in recent years regarding the frequency of nursing. The habits of feeding the baby at regular two hour intervals, or at each time that it cried, has objections. The extremist who advocates a four hour nursing interval for all infants, likewise is open to criticism. In my judgment no infallible rule can be given for the frequency of breast feeding during the first period. I am sure that I have saved the breast food for many infants by demanding that feedings should be given at intervals of two hours for a limited period of time. The added stimulation to the breast by frequent nursing is most beneficial in establishing the flow of milk, and once that milk flow is established, then the infant thrives best by increasing the intervals to either three or four hours.

The length of time that an infant should feed at each nursing is best determined by the infant himself, provided he can be kept actively at his work until he has finished. Generally speaking, it is safe to say that the babe should obtain sufficient amount of food from a properly secreting breast, within twenty minutes and frequently in six to ten minutes. If he persists in nursing thirty or forty minutes, or even an hour, it is quite certain that he is not getting a sufficient amount of food. This is easily determined by weighing before and after feeding and by watching the weight curve.

*Stools.*—Especial attention must be directed to the comparative unimportance of examination of the stool during the first period of maternal nursing. Be cautious as to the serious significance which you attach to stools of breast fed infants which do not conform to the so-



called normal. The stools which are really important are: 1, the starvation stool which consists of dark green mucus, and always indicates that the baby is not getting food into its intestines; 2, that very scanty and infrequent stool; by infrequent we mean none for a period of a few days. This again occurs when the infant is getting insufficient food; 3, the real genuine diarrheal stool, thin, watery, occurring eight, twelve or more times in twenty-four hours, is of rare occurrence in the first period of maternal nursing. Under perfectly normal conditions one finds a stool occurring after each nursing, which may be loose and contain some small flocculent curds; may have some green color and mucus. This stool is not an indication for calomel or oil, but occurring in a contented happy child should be forgotten.

*Vomiting* may be a most important symptom during the first period. One must distinguish, however, between a genuine vomiting and a simple regurgitation of food from an overloaded stomach. In the early days of breast feeding the infant may have genuine vomiting of all food or water and yet no mechanical obstruction be present, due to inability of the infant to digest the first rich milk. A careful study and management will bridge over this trouble, and patience will be rewarded with a continued feeding of breast milk to the entire welfare of the infant.

It is of course important to recognize the occurrence of a true and persistent vomiting and search for the cause which may be and usually is not to be found in the breast milk, *per se*, but in either a mechanical obstruction or environmental influences of unfavorable character to the secreting source of the milk.

*Supplement Feeding.*—An important aid in preserving breast milk is found in the use of supplemental feedings. In using this method the breast milk is conserved for its full value even though that value is not sufficient for the infant's needs. The mother is instructed to nurse at the breast at each regular feeding, and a properly prepared cow's milk mixture is given from the bottle immediately after nursing. The method of supplemental feeding by alternate breast and bottle is not as successful as the mixed feeding at each period of nursing. If the breast is nursed only two or three times in twenty-

four hours the tendency is for the secretion of milk to lessen or even cease.

Not only the nutritive value in the breast milk is saved for the infant but also that protective property which maternal milk gives the infant, and which we cannot measure by our physical and chemical standards. A properly regulated mixed feeding may be started in the first period and carried through the second or even the third period with the proper balance of nutrition obtaining, whereas with either breast milk alone or artificial feedings alone, the results could not be obtained with the same degree of contentment.

The diet of a nursing mother demands careful attention. She should have the food which her appetite naturally craves, but she should be instructed not to eat food which causes indigestion. The food taken should be simple, of good variety, tastily prepared and regulated in quantity to meet the requirements for proper secretion of milk. The flow of milk has been conserved from a direct standpoint in my experience preferably, by following the above rules, and additional food in the form of milk mixed with various cereal gruels. The importance of this latter is to be found in the regularity of giving such mixture. My rule is to give a glassful about fifteen to thirty minutes just preceding the nursing time.

During the second period of maternal nursing the infant will usually thrive properly if the breast food has been sufficient during the first period. It is wise to have the mother report about once a month that you may keep watch of the progress.

In the third period one should be watchful for signs of insufficient food and evidence of lack of balance in nutrition. The infant may be perfectly well and happy but the mother notices it has reached a stationary weight. This may continue for weeks. Again the child which had previously slept all night now awakens several times for feedings. A happy baby has become a crying, fussy infant, evidently not satisfied with the nursings. The babe may persist in staying at the breast when formerly it was contented with nursing eight to fifteen or twenty minutes and gained; now it will nurse thirty to sixty minutes and not be satisfied. Furthermore, even in the presence of satisfactory con-

ditions of contentment, and gains in weight there may develop beginning signs of chronic nutritional disturbances such as rickets, tetany, etc. Just as it is important to develop an exclusive breast food during the first period of maternal nursing, so it is necessary that supplemental feedings should be started usually about the fifth or sixth month.

#### RECAPITULATION.

*First.* Conservation of the breast food in the first two months practically insures a breast food for the infant in the second and third periods.

*Second.* The first is the most serious period for the mother and babe.

*Third.* Proper management of environmental conditions should receive most patient and careful consideration.

*Fourth.* The relative unimportance of the laboratory examination of breast milk.

*Fifth.* The relative unimportance of the appearance of the stool.

*Sixth.* The necessity for the physician to recognize that the conservation of the mother's milk, can only be accomplished by his careful, earnest, and conscientious attention to details.

*Seventh.* The importance of properly regulated mixed feedings as a means of conserving maternal milk.

4601 Broadway.

#### ELECTRICAL TREATMENT OF INFANTILE PARALYSIS.

EMIL H. GRUBBE, B. S., M. D.,  
CHICAGO.

The principal objects of this paper are: First, to call attention to the fact that although modern electrical treatment of infantile paralysis is of the greatest value it is not appreciated by the majority of medical practitioners. Second, to show that when we use electrical treatment in this disease we exhibit sense, common sense at that. Third, to insist that we make more extensive use of this treatment in order that the many sufferers may be helped before it is too late.

Each epidemic of infantile paralysis calls attention anew to the serious nature of the after effects, the paralysis, of this disease. It may sound blasphemous but it is nevertheless true

that paralysis is mainly due to improper treatment during the convalescent stage of the disease. The convalescent stage of infantile paralysis lasts a long time, usually two years, hence physicians who have charge of these cases may have much to answer for.

What is the object of all treatment for infantile paralysis? This may be summed up in one short sentence, viz.: the prevention of deformity. The problem then is to find remedies which will keep function in the muscles and thus prevent deformity. What remedies have we to offer? Comparatively few remedies are available for this purpose. Practically there are only three: massage, passive motion and electricity. Of these the last mentioned is the most useful.

As physicians you know that paralysis means inability of the will of the patient to contract muscles. You also know that electric currents may be used to contract muscles. This power of electric currents is capable of exercising muscles with or without the will of the patient. It takes no stretch of the imagination to conclude that an agent with such distinct properties should appeal to us as offering therapeutic possibilities in the treatment of infantile paralysis.

The principal advantage of electricity over massage and passive motion is due to the fact that the former promotes the passage of nerve impulses as well as retards muscle atrophy, whereas the latter two remedies have no stimulating effect upon the nerves. In addition to the mechanical contractile effects upon the muscles electricity also possesses chemical properties which act as a powerful stimulant to the nutrition of all tissues in the affected region. Finally electrical treatment when compared to other treatments is precise, not haphazard. With electricity we can pick out and treat individual muscles. On the other hand with massage or passive motion we treat the normal as well as the sick muscles; we treat groups rather than single muscles; we treat arms and legs rather than the particular parts which control these comparatively large areas.

Electrical treatment of infantile paralysis must be considered from two distinct standpoints in order that proper results may be obtained and also in order that the remedy may receive proper credit for the good it can do. First, electricity



can be used to prevent primary muscle atrophy which is due to lack of motion, and, second, it can be used to prevent progressive muscle atrophy and the deformity which would result therefrom. What are the gross pathologic conditions involved in the paralysis of this disease? To begin with there is deprivation of voluntary contractility in the muscle—a purely functional trouble; this is followed by atrophy of the muscle—an anatomical trouble. The patient cannot contract his muscle, therefore we must help him to do so.

Electricity is the only agent known which is capable of producing muscle contractions similar to those voluntarily produced by the patient. In other words, you will hunt a long time before you will find another remedy capable of doing what electricity will do for these paralyzed muscles. Furthermore, what electricity does to these muscles is all that needs to be done; all other treatment should be considered secondary and usually does more harm than good.

This may appear to you as a bold statement, yet, if you will study the subject thoroughly you will find it to be true.

Electrical treatment is not to be used during the acute stage of the disease; it is called for only when there is positive evidence of atrophy or paralysis. Strictly speaking electricity is not a remedy at all for infantile paralysis; it is rather a remedy to combat and limit the sequelae of this disease.

As long as tenderness is present in any muscle the patient should rest, if necessary, with the aid of well fitted supports or splints. Usually electrical treatment can begin at the end of the second week of the disease. Atrophy is not an early symptom. It usually shows a week or more after the disease has started and when it begins it proceeds slowly. But we must never wait until there is decided atrophy before beginning electrical treatment. By waiting too long we give time for the development of atrophy often so profound that it may not be checked in time to prevent deformity. I am convinced that by proper electrical treatment, begun in time, atrophy can be almost entirely prevented.

In a given case to absolutely settle the question of whether there is or is not a state of muscular weakness we make the electrical reaction test for degeneration. This gives both qualitative and

quantitative information pertaining to each muscle or group of muscles tested. This test can be made without harm to the patient and should, therefore, be used more frequently than it has been in the past. Only by this means can we accurately locate the limits of the paralysis. I believe that this is so important that I am willing to state that no case has been properly treated unless the reaction test for degeneration has been made. If electricity did nothing else for infantile paralysis but locate accurately the muscles or groups of muscles which need treating it should be welcomed, for it will have a very big field of usefulness—a field in which it has no competitors.

Now, the mere giving of electricity is not all sufficient in treating this disease. Electrical treatments must be properly given or they will do more harm than good. Fatigue, that destroyer of what muscle function is left, can be produced by too much or too long applications, therefore in order that these treatments may be worth while they should be given by someone well versed in both anatomy and electricity.

The methods for applying electric currents in infantile paralysis are numerous and usually quite unscientific. When we realize that this is primarily a disease of the nervous system we must conclude that the nerves need treatment as well as the parts controlled by them, i. e. the muscles. The common way for applying electricity which consists in trying to locate the points of origin and insertion of a muscle by means of the electrodes is wrong because the nerve controlling the muscle is not considered in the treatment. The nerve needs treatment more than does the muscle and should receive our serious attention.

The scientific way to give electricity in infantile paralysis is to apply the electrodes to the nerves controlling the affected muscles. This can be done by locating the motor point on the muscle with one electrode and allowing the electricity to enter at that place. The other electrode, known as the indifferent one, should be placed at the spine as near the exit of the affected nerve as is possible. When you recall that this disease involves that area of the spinal cord which controls the motor nerves—the anterior horn, then you will readily see the importance of exciting muscle action through the motor points of the

nerve which are located on the surface of the affected muscles. This, in my opinion, is the only rational way for giving electricity.

Since there are several varieties of electricity what kinds should be used in the treatment of this form of paralysis? Personally I consider only galvanic and static currents capable of meeting the requirements for a scientific remedy and therefore I use these two currents to the exclusion of the others. In a given case the choice will depend largely upon what the reaction test for degeneration has shown. If the test shows fair excitability of the muscles under galvanic current then this is the current to use in treating the case. On the other hand when the lesion is by test shown to be a profound one, then the static current is of more value and so would be preferred. In adults I choose the static current, no matter what the degree of paralysis. Its application is more convenient for both patient and operator.

The technique for giving galvanic electricity is as follows: The negative electrode consists of a piece of sheet tin or copper about 3x8 inches or larger in size. This is covered with a towel which has been moistened with warm water and placed in the region of the lesion at the spine. To keep it in place a bandage may be used or the patient is allowed to lie upon it. The positive electrode consists of a metal disk about one-half inch in diameter. This is covered with well wetted cotton, attached to an insulated handle which is held in the operator's hand and placed, by him, to the various motor points on the paralyzed muscles. The current must be interrupted by means of a rheotome so as to make it possible to produce the rhythmic contractions required in the various muscles. This rhythm is very important. Short muscles should be contracted more rapidly than long muscles. As a rule the muscles of the hand and foot need to be contracted from 30 to 40 times per minute; those of the arm and leg from 10 to 20 times; and those of the abdomen and back from 20 to 30 times. In order to avoid tiring the muscles the period of activity should be followed by an equal period of rest. To start with, each motor point receives the current for about one-half minute's time; as the treatments are continued and improvement is shown, each contact may be allowed to remain for a period of from 1 to 2 minutes. Every motor point con-

trolling a paralyzed muscle must receive individual treatment, i. e., the electrode must touch each motor point separately.

The question of quantity of current to use depends upon the individual muscle under treatment. The smallest amount which will produce muscle contraction is all that is allowable. In order that the contractions may be accurately observed a good light is very desirable. From 2 to 5 milliamperes will usually be found sufficient quantity to produce visible contractions.

In giving static electricity the following technique is used: Leyden jars are attached to the machine. The prime conductors touch each other. One pole of the generator is grounded and the other, attached to a small metal ball which is held in the operator's hand by means of a well insulated handle, is placed upon the various motor points. The rhythm of contractions is dependent upon the speed at which the machine runs and is the same for the different muscles as that given previously under galvanic treatment. To regulate the amount of current the prime conductors are separated—the larger the air gap between them the greater is the volume of current available for excitation of the muscle. A one-half to one inch spark gap between the prime conductors is suitable for the muscles of the hand or foot; 2 to 3 inch spark gap for the muscles of the arm or leg; 3 to 4 inch spark gap for the muscles of the abdomen or back. With either static or galvanic currents the treatments are given daily. When improvement appears the interval between applications may be lengthened.

It is a mistake to suppose that by giving a muscle a large amount of electricity we will do a proportionate amount of good. A little may be enough, too much is dangerous. To be on the safe side we should use just enough current to produce contractions, but no more. If the electricity be applied for too long a period, or if too strong currents be used fatigue of both nerves and muscles will result and our object will not have been attained. Only from long experience can the operator tell when the treatment produces muscle exhaustion. Overworking a fatigued muscle is dangerous, for it may lose its recuperative power completely and also permanently. In this connection it is important to remember that the muscles which are antagonistic to the paralyzed ones are not to be excited



during electrical treatment. An ideal treatment is obtained when the weak muscles are not over-exercised nor the strong or well muscles excited.

Naturally, in children the difficulties of applying electricity are great and one must overcome the little patients' fear by patience. Too much should not be attempted at the first sitting and only weak currents should be used until the patient acquires confidence.

When you understand how complicated the electrical treatment of infantile paralysis is you will readily see how impossible it is to get ideal results when inexperienced physicians or the laity make these applications.

The time during which benefits may be expected from electrical treatment is unlimited. I wish to emphasize that even in old, long standing cases, persistent, scientific application of the proper electric current will bring back considerable control and strength in the paralyzed parts. I have been able to produce decidedly beneficial results in cases where the paralysis had been of over ten years standing. This will appear reasonable when you recall that every muscle is connected with more than one nerve center, and, although one particular center may be completely out of order, others may be only partially without function. Remember that regeneration of nerve tissue is natural and needs only slight but proper assistance in order that permanent beneficial results may be brought about. Therefore, it may be said that it is never too late to begin electrical treatment in any case of paralysis. Of course in these old cases improvement should be expected only after many months continuous treatment, but even so, if then we obtain fair control of the muscles of a seemingly dead arm or leg we certainly have won back a precious function. So the usual hopeless view of the patient or those in charge should not be encouraged.

In conclusion, do not understand me to claim that electricity is a magic cure for infantile paralysis. It is not. It is not offered as a quick method for restoring withered muscles, but its early, patient, persistent (not spasmodic) use will bring rewards not obtainable by other means. Electricity is the only logical and natural remedy available at the present time. There is no substitute for it, consequently it should be used in the treatment of every case of infantile paralysis.

I predict that the electrical treatment of this

disease will be, just like was the x-ray in therapeutics, eventually appreciated. Yes, eventually, but why waste two decades of time as was done in the case of the x-ray? Eventually, why not now?  
130 N. State Street.

## REMARKS ON THE TREATMENT OF CAVERNOUS AND PLEXIFORM ANGIOMA.\*

FRANCIS REDER, M. D., F. A. C. S.,  
ST. LOUIS, MO.

An angioma is a vascular tumor, non-malignant in character. On an anatomical basis angiomas can be classified as venous, which are rather frequently observed; then arterial, or plexiform angioma, otherwise known as a cirroid aneurism, the "angioma arteriale racemosum" of Virchow, a vascular neoplasm rarely observed, and, lastly, the capillary form, the so-called "port-wine stain" or "mother's mark," which is quite common.

The theory that these neoplasms are caused by a dilatation of the capillaries, the walls of which have become absorbed, resulting in the formation of spores, has been favorably received. Of the cavernous angioma it can be said that it is a blood-filled cavity, non-pulsating, of variable size, with a thin covering of skin usually bluish in color.

The walls of these spaces possess an endothelial lining similar to that of veins. Numerous tortuous vessels supply the blood which fills these cavities and circulates with varying degrees of rapidity. The arteries open directly into the cavities.

The connective tissue enmeshing the vessels of an angioma is sometimes scanty and sometimes plentiful, thus causing irregularities about the vascular tumor that often give it a lobulated appearance.

Venous angiomas may be diffuse or form a distinctly circumscribed tumor. A circumscribed cavernous angioma possesses its distinct efferent artery and afferent veins and does not communicate with the neighboring capillaries, i. e., there exists no anastomosis with the capillaries in the surrounding tissue. The angioma shows a circulation wholly within itself, there being only a

\*Address delivered before the Chicago Medical Society, Oct. 17, 1917, with lantern slide demonstration.

connection with the neighboring arteries and veins.

Their growth is slow. They increase, however, progressively in size with the growth of the patient, viz., a babe which at three months shows an angioma upon its lip that has the appearance of a flea-bite, will exhibit the same lesion the size of a hazelnut nine months later.

These vascular neoplasms are congenital in their origin. They are benignant in character, and although their histological formation closely resembles certain types of malignancy, yet clinically angiomas are considered non-malignant.

One of the principal characteristics of a hemangioma is that the entire tumor can be caused to disappear upon pressure, with a prompt return to its original size as soon as the pressure is removed.

Another characteristic is the prompt response in reflecting the temperament of its possessor, excitable influences causing the tumor to swell, become tense and more deeply discolored. This is accomplished through elastic fibres, closely resembling the normal erectile tissues of the body, which are contained in the connective tissue stroma.

From statistics it must be inferred that the face is the favorable locality for an angioma, two-thirds of these growths being located there.

The brow and the cheek seem to be selective regions. Next in frequency come the lips, the nose, the ears, and the eyelids. Strange as it may appear, the feminine sex is more prone to this affection than the male, two-thirds of all cases occurring in females.

Cavernous angiomas may also occur in the orbit, muscle, liver, spleen, kidneys, and the alimentary tract.

These vascular tumors have also been found in bone, the "myelogenous angioma" of Virchow, an extremely rare condition. Clinically the resemblance of a myelogenous angioma to an osteosarcoma is very great, making an intravital diagnosis almost impossible.

Inasmuch as there is no pain in connection with a cavernous angioma, excepting when the tumor is so located as to cause pressure upon a nerve, the discomfort experienced must be ascribed to its size and, of course, its location. For instance, a vascular tumor situated upon the upper eyelid can become very annoying on ac-

count of visual interference. Again, an angioma of the cheek may involve the buccal tissue to such an extent as to make mastication difficult and even dangerous. This was exemplified in one of my cases where the patient accidentally bit the inner side of her cheek, causing an alarming hemorrhage.

Now let us consider briefly the plexiform angioma. This is usually a distinctly outlined tumor occurring in definite arterial regions. According to Fischer, 12 per cent. are of traumatic origin, the remaining 88 per cent. being derived from simple congenital angioma.

The tumor is composed of arteries and veins, the tortuous vessels giving this tumor mass a most characteristic appearance.

A favored site is upon the forehead, scalp and face. It is not infrequent, however, to find the hand, fingers and forearm affected.

In its clinical characteristics a plexiform angioma differs markedly from the cavernous type. The former usually forms a flattened tumor, gradually spreading into the surrounding tissues. The skin covering the tumor is very thin, usually more of a reddish than a bluish color, and is locally adherent. Pressure upon the mass will not cause it to be completely evacuated, as is the case in a cavernous angioma. This must be attributed to the large number of anastomoses.

Another characteristic phenomena found in the plexiform angioma and not present in the cavernous variety is the well-marked pulsation and bruit. For instance, the hand flatly applied to a plexiform angioma will distinctly perceive the pulsation and bruit in the tumor. Such an angioma located on the scalp or forehead will often cause a partial destruction of the underlying bone by attrition. This defect can be readily discovered by making gentle, but firm, pressure upon the thinned-out skin of the tumor, at the same time sweeping the finger over the affected area.

A plexiform angioma is not free from clinical symptoms, it usually causes dizziness, vertigo and a dull pain in the head. Such disturbances are not associated with a cavernous angioma.

The capillary forms of angioma have very little clinical significance, and exclusive of their unsightly appearance, cause no discomfort. It is not often that the possessor of a port-wine stain seeks advice as to the possibility of having



it removed. Even so, should the angioma involve a large area, which they not infrequently do, nothing of an encouraging nature as to its total or even partial removal could be promised.

An interesting fact in connection with capillary angioma is that their distribution often corresponds to the area of distribution of the three branches of the fifth cranial nerve, viz., angioma of the frontal germinal area and angioma of the superior and inferior maxillary areas. Bärensprung was the first to call attention to this. Cushing and others later confirmed his observations. Simon entertained a similar theory. He became impressed with the idea that nutritive disturbances in the region of the trigeminus were causal in producing such a condition.

Virchow advanced a theory that angiomata find their origin in the embryonic relations when slight irritative conditions about the margins and the circumference of the fetal clefts, which are always copiously supplied with blood vessels, may cause an abnormal development about these parts, with the possibility of a nevus formation. Such a condition may remain latent for a time and later manifest itself as a cavernous angioma. Virchow has applied to them the name of "angioma fissuraux."

According to Ribbert, the genesis of angiomata rests with two questions, viz.: Is the tumor a simple dilatation of the vessels in a circumscribed area, or is the tumor the result of a new growth?

To this may be added Stangl's argument as to whether or not these vascular tumors are of epithelial or connective tissue extraction.

Ribbert advocates the view that they are the result of a new growth.

From the exhaustive researches that this interesting vascular lesion has been subjected to, the inference must be made that the genesis of angiomata is not clearly understood.

A cavernous or plexiform angioma, especially those of larger size, is one of the most difficult lesions with which the surgeon has to contend. In fact, some of these lesions are looked upon as inoperable and have been abandoned to an ever-increasing deformity and discomfort.

The most radical intervention for the "cure" of an angioma is excision. However, before having recourse to this measure, it is well to consider several salient points. One, a point of much import, is the size and location of the

angioma, and the risk to life from hemorrhage. Another point, and one that commands recognition, especially when the angioma is located on the face, is the liability to deformity from mutilation and cicatrization.

These two points can be fused into one consideration for the surgeon who attempts to "cure" an angioma by excision, viz., that this radical measure is only permissible when the vascular tumor is of limited extent, well-circumscribed and situated in parts which can be sacrificed without the danger of great hemorrhage or the loss of important structures.

In an angioma of the face the effect of a mutilating or disfiguring operation must be seriously considered, especially in the female sex.

That many of these tumors are inoperable, i. e., not amenable to extirpation, has been demonstrated repeatedly by an attempted operative measure which had to be abandoned.

Other surgical measures, such as peripheral ligation, ligature of the afferent arteries, and tissue strangulation by the buried ligature have been considered when an extirpation seemed too hazardous. However, the results have at best been only palliative.

The severity of surgical intervention in dealing with an angioma caused other methods to be promulgated. Efforts were made to destroy the growth with all its constituent elements by the interstitial action of irritating caustics or other agents applied externally or introduced into the afflicted tissues. Some of these methods have been used by me, but have proven disappointing.

For instance, the injection of alcohol (Schwalbe) and ferric sesquichloride are very prone to cause suppuration, and are not to be recommended. The injection of hydrogen peroxide (Mosetig-Moorhof) is a dangerous agent to use. Its introduction may be followed by a fatal gas embolism in the lungs. Payr's method, consisting of the introduction into the tumor of darts or rods of magnesium, a procedure that does not involve the danger of thrombosis or embolism, is not familiar to me, neither have I had any experience with radium.

The injection of water at the boiling point as recommended by Dr. John A. Wyeth has given me the most satisfactory results. The method must be looked upon as one of the advances in

the treatment of vascular tumors. Of 96 cases subjected to this method I have had no failures to record. The results were certain; the procedure was free from any accident. There are two cases, however, of which I wish to briefly speak.

*Case 1.* A child of sixteen months, with an angioma on the lower lip to the left of the midline, in size as large as a filbert. Two injections were given in the course of six weeks. The tumor was reduced to slightly less than half its size. It was then quite hard and its color, which before the injection was purple, was that of the normal lip.

The mother became dissatisfied that the tumor had not entirely disappeared with this treatment. At the advice of her friends, she saw a physician who removed it by excision. The removal was a success, and were it not for the scar on the lip the result would have been ideal.

I was informed by the physician that the removal was attended with but little bleeding. This must be explained on the assumption that the blood, coagulated by the boiling water, had become well organized. The mouths of the vessels opening into the vascular tumor had been well sealed. It was noticed during the second injection that the boiling water did not enter the vascular growth so easily as during the first. More piston pressure was necessary and the difficulty was plainly apparent. This was noticeable in every angioma of the lip that required subsequent boiling water injection.

The structure of the lip is peculiar in its makeup, and it is advisable to use extra precautions while introducing the boiling water. It is far better to subject the tumor to a subsequent injection, rather than have an overdilatation during the first injection that may be the cause of a slough. The greatest success in a lip angioma, however, can be obtained by introducing the proper quantity of boiling water at the first injection. Otherwise, conditions may arise, as those just cited, which may invite excision.

It is gratifying, however, to know that a lip angioma which had not been entirely obliterated by the injection of boiling water can be excised with very little loss of blood.

*Case 2.* The other case was that of a young man who had an angioma midway on the right margin of his tongue. The growth was as large as a pecan nut and deep purple. About one-half ounce of boiling water was introduced into it. Within six hours the edema had involved the epiglottis to such an extent that breathing was seriously embarrassed. It was necessary to perform a laryngotomy. In thirty-six hours the edema had subsided and breathing again became normal. The angioma disappeared entirely in eight weeks.

In this case too much boiling water had been injected at once. It would have been safer to have given a lesser amount, repeating the injection in three or four weeks, if necessary.

The question, whether or not a cavernous or a

plexiform angioma is a lesion that endangers life must be answered in a guarded manner. These vascular tumors possess an element of danger in proportion to their size and location. When there is non-interference, their growth may eventually produce a secondary lesion by spreading indefinitely, which may cause death. When there is operative intervention, i. e., excision, the great danger is hemorrhage.

The injection of boiling water is not entirely free from danger. However, of all the procedures it is unquestionably the safest. The danger of an embolism must be reckoned with and in all injections peripheral compression while the boiling water is being introduced into the tumor must be made.

There is always a possibility that boiling water injected into a plexiform (cirroid aneurism), located upon the head, might be productive of a meningeal trouble. Furthermore, it may be readily assumed how a slough can result from boiling water when injected into a cavity filled with blood. It is not a simple matter to judge a boiling-water injection.

Before speaking of the technique of the boiling-water injection I wish to say something about a type of nevus which is elevated above the skin, and has been of interest to me. It is not infrequent that a nevus complicates an angioma. The treatment of a nevus has proven more or less unsatisfactory to me, no matter what method I employed. The Paquelin with round point has given the best results, yet it was not satisfactory because recurrences were numerous, requiring repeated applications of the cautery. This procedure usually resulted in a well-defined scar, which was very undesirable.

By using the boiling water in conjunction with the cautery, I found that usually with one application of the cautery a satisfactory obliteration of the nevus could be accomplished. This is to be explained on the ground that the nevus is fed by deeper lying vessels, even in the absence of an angioma. The injection of boiling water introduced underneath the skin in the connective tissue in the immediate vicinity of the nevus will obliterate these vessels, thus depriving the nevus of further nourishment. The cautery, with the aid of this starvation, will usually prove successful with one application.

In making the injection of boiling water



into an angioma certain conveniences will expedite this measure. A suitable syringe is essential. I have found an all-glass syringe with a good shoulder, a large ring on the piston, and an asbestos plunger, to have answered the purpose better than any of the many I have tried.

A syringe with an all-glass plunger has its drawbacks, as the steam generated within the barrel will find its way between it and the glass plunger, thus inhibiting the free and easy movement of the piston, so essential to this procedure.

The slip needle (small caliber, No. 20) is the preferable one. With it no time is being lost in the transference of the boiling water. It should always be borne in mind that the water must be injected at a boiling temperature and time is an important factor. It can be stated that those cases of angioma subjected to the boiling-water treatment, which did not respond properly, did not receive the "water" hot enough.

To protect the hands, at the same time making it possible to handle the boiling water, a pair of easy-fitting chamoisette gloves of good thickness have served me well. That portion of the glove intended for the little finger is cut off, so that the degree of heat in the tissues can be judged by occasional contact with the exposed little finger.

The arrangement in the operating room should be such that the surgeon stands between the vessel containing the boiling water (the water being kept constantly at the boiling point over a flame), and the patient, at a distance that will not necessitate a step on the part of the surgeon for the transference of the boiling water into the tumor mass.

The parts not involved should be protected with moist cloths, lest a scalding of these tissues might result from the hot water in the syringe being forced out at the needle junction by the generated steam.

The introduction of the needle and the force applied in injecting the hot water is of much importance. Inasmuch as the tissues of the new growth do not offer the resistance of normal skin, the hot water injected without great care may cause these tissues to break down. Injections made directly into the soft vascular mass are invariably followed by a necrosis.

For this reason it is well to make the initial injections by introducing the needle through the

sound skin about one-sixteenth or one-eighth-inch from the edge of the angioma, well into the base of the vascular tumor, thus assuring coagulation of the deeper parent vessels. This is also a wise precaution against the dangers of embolism.

If the arteries leading into the tumor can be demonstrated, it is well to enter the needle along their course and inject a sufficient amount of boiling water to cause coagulation in these vessels.

Judgment should be exercised in introducing the needle to prevent the point from resting too near the opposite wall of the tumor. To properly estimate this procedure it is well to first introduce the needle without the syringe, and pushing it through the mass till it can be felt on the opposite side, then withdraw to the extent of a half an inch. This will give a reasonable assurance that the boiling water can be injected into the tumor without the likelihood of getting a slough. When the skin begins to show signs of becoming blanched and turns greyish in color, the injection into that area is to be discontinued. Hyperdistention must be carefully guarded against. The amount of hot water necessary to cause this bleaching rests wholly with the amount of tissue under treatment. After coagulation of this particular area has been satisfactorily accomplished, the point of the needle is made to penetrate into another area and the hot water injected.

In this manner the needle is introduced into the tumor in different places, and at various angles, till the whole mass gives evidence of coagulation.

The quantity of hot water which may be injected at one sitting can amount to two or four ounces in a tumor the size of a hen's egg, the time consumed in making the injection being about three minutes.

However, if the new growth is of unusual size, it would be advisable to inject only a portion of the tumor at one time, making a subsequent injection two or three weeks later.

It is interesting to observe the characteristics presented by an angioma subjected to the hot water treatment. The independence of the blood spaces from the blood vessels of the surrounding tissue can be demonstrated by the fact that the neighboring tissue is not affected, i. e., none of

the hot water finds its way into the adjacent structures while the injection is being made. However, shortly after the injection an edema of the immediate parts begins to manifest itself. This edema may be very extensive according to the amount of hot water injected. Frequently, when the lesion is on the face, the swelling may become so extensive as to close the eyes.

Although the condition looks alarming, there is little ground for actual fear, except when an injection is made for an angioma on the tongue. The patient suffers no pain, the condition is an afebrile one, and the edema usually subsides within the first week.

It is a wise precaution to apply ice or cold compresses to the tumor and surrounding tissues immediately after the injection for the first four to six hours, thereby lessening the severity of the edema.

At the end of the first week the tumor, but slightly diminished, has almost fully lost its pathological color and the tissues are beginning to assume a normal appearance.

To the touch the mass is hard. If it remains hard, the degenerative process is active and no further injection will be necessary. Should the tumor, however, begin to show evidence of softening with visible formation of new blood supply, an immediate injection is indicated.

The course of an angioma successfully injected is one of gradual diminution, the greatest progress being made from the second to the third week. A tumor the size of a hen's egg will usually require six to eight weeks for its disappearance. If the injection has been a fortunate one, i. e., free from any accident, such as cicatrization following sloughing, the site that once harbored the angioma will appear healthy and quite normal.

It is advisable that a general anesthetic be administered. The assurance of greater accuracy in administering the injection is thereby given. Sometimes, however, a general anesthetic may prove harmful, as has been the case in a circoid aneurism, when the anesthetic had to be discontinued for fear of bursting the tumor. I have repeatedly given the injection without an anesthetic and was astonished that the pain was not more severe.

*A Case of Plexiform Angioma (Circoid Aneurism).*—J. W., aged 43 years, a carpenter, struck the frontal portion of his head against a joist six years

ago. Two years later he noticed a swelling in his forehead which gradually became larger, spreading beyond the hair margin onto the scalp. During the last six months he suffered much with dizziness and noises in his head.

Examination revealed a tumor mass involving the frontal region back to the coronal suture. Laterally the swelling extended to the temporal ridge. The tumor mass was evenly distributed. A hand placed flat upon the forehead would give a good idea of its size.

The tumor was bluish in color and the undulations of its surface gave it a convoluted appearance. All vessels leading to it were tortuous and filled to such an extent as to make them appear abnormally large. Distinct pulsations in the vascular tumor were visible and a marked aneurismal bruit and fremitus were present.

There was considerable destruction by attrition of the outer table of the skull.

On August 10, 1917, under a general anesthetic, this tumor mass was injected with six ounces of boiling water. As soon as the water was introduced into the cavity of the tumor, pulsation ceased. The doughy feeling of the mass gave evidence of thorough coagulation of the blood.

An edema began to develop immediately. In two days it had reached its height. It involved the upper half of the face, closing both eyes. After the third day, the edema subsided rapidly and the patient was able to leave the hospital on the fifth day.

Six weeks later all evidence of the circoid aneurism had disappeared. There was only a slight thickening discernible at its former site and that was undoubtedly due to an infiltrated periosteum. The dizziness and noises in the head had disappeared.

*A Case of Cavernous Angioma.*—Miss G., aged 33 years. Left upper eyelid harbors an angioma as large as a hen's egg. A picture of the patient taken when two years old shows the left eye closed by a tumor mass in the upper eyelid. The sight in the left eye, though weak, is normal, the tumor, however, robbing the patient of its usefulness.

At the age of 15 years, an operation, by a skillful surgeon, was performed. The operative measure consisted in the ligation of vessels leading to the angioma. There was a slight improvement, but not enough to open the eye.

A year later, the condition getting worse, i. e., the vascular tumor enlarging, another operation of a similar nature to the previous one was performed. No improvement.

In October, 1914, the patient went to a New York surgeon to subject herself to the radium treatment. This treatment was refused, injury to the eye being feared. An operation at St. Luke's Hospital was performed instead. This operation gave considerable improvement. Patient was able to slightly elevate the upper eyelid.

Improvement lasted four months, when the blood tumor again began to show evidence of enlarging.



In July, 1915, when I saw the patient, a bluish mass, very soft to the touch and about as large as a hen's egg, appropriated the upper eyelid.

There were numerous scars in the immediate vicinity of the eye, evidences of former operations. There was a very conspicuous cicatrix along the orbital ridge, evidently the remains of an attack on the supraorbital artery.

The location of the angioma made the boiling water treatment a rather hazardous undertaking. Under extraordinary precautions, three injections were given, covering a period of seven months (the first injection was given July, 1915, the last February 1, 1916). Owing to the great amount of cicatricial tissue about the angiomatous area, the full influence of the boiling water was to some extent interfered with. Nevertheless, the angioma was made to disappear. The patient is now able to open her eye to two-thirds normal. The color of the skin is almost normal.

The sight of the eye, which at first was very weak, is being gradually restored with the aid of a proper lens.

## A REVIEW OF THE RECENT WORK ON THE ETIOLOGY OF PNEUMONIA.\*

WILLARD W. DICKER, M. D.,  
CHICAGO.

Assistant Professor of Medicine, Rush Medical College.

Pneumonia is the most frequent and has the highest mortality of any of the acute infectious diseases, and up to the present time there has been very little definite knowledge of how it is spread. We have known for a long time that practically all cases of lobar pneumonia were caused by the pneumococcus and we have also known that in a large number of normal mouths a pneumococcus could be found.

We have considered that either the virulence of the ever present bacteria suddenly increased or else the resistance of the body decreased and pneumonia then set in. In other words, we thought all cases of pneumonia were autogenic.

A few years ago work was started on the pneumococcus at the Hospital of the Rockefeller Institute in New York to determine the differences in the various races of pneumococci, and in 1913 Dochez and Gillespie reported the results of three years' work.

They separated four distinct groups of pneumococci by means of serum protection experiments and agglutination tests. These groups were absolutely distinct. The serum of an ani-

mal immunized against one group of pneumococci, would protect another animal against that group, but not against the other three groups. In a similar way the serum would agglutinate only the pneumococci against which it was immunized and have no effect on the other groups. There was no cross protection between the groups and they were unable to change one type into another. As far as these tests are concerned, the types are just as different as if they were different organisms.

This is not an unusual condition in bacteriology. In fact, there are many examples. In paratyphoid we have two distinct types; in dysentery we have several types which resemble each other in their cultural characteristics, but are decidedly different in their immunity reactions.

In studying their cases they found about 33 per cent. were caused by an organism which they arbitrarily called Type 1. These were all cases of average severity and showed a mortality of 25 per cent. In the second group, caused by an organism which is called Type 2, fall about 31 per cent. of cases. This type of pneumococci causes a more severe pneumonia and show a mortality of 36 per cent. The third group, caused by Type 3 organism, contains a much smaller number, about 11 per cent., but these are the most severe forms having a mortality of about 47 per cent. This Type 3 organism is the pneumococcus mucosus which has cultural characteristics distinct from the others. In the fourth group fall the rest of the cases and it is a heterogeneous group. The Type 4 organisms have no distinct characteristics. It includes 23 per cent. of cases which have the lowest mortality, only 6 per cent.

It was found by other men, in other cities and other countries, that there were the same types of pneumococci and present in about the same proportion and with about the same mortality in each group.

The next step was to find if these pneumococci all were present in the normal mouth. Dochez and Avery made cultures of the bacteria of the normal mouth and found that 60 per cent. of cases showed pneumococci, but found practically none of the first two groups. Now this is a rather surprising fact when you remember that Types 1 and 2 cause about 65 per cent. of all cases of

\*Read before the Aux Plaines Branch of the Chicago Medical Society, October 26, 1917.

pneumonia. A few pneumococci of Type 3, the pneumococcus mucosus, were found and the rest all belonged to Type 4. The latter type causing only about 20 per cent. of all cases of pneumonia and these, the mildest type with the lowest mortality.

From these experiments it is clear that the majority of cases of pneumonia are not autogenic infections; that only the smallest group of very mild cases are of this kind, as Type 4 organisms are the only ones found in the normal mouth.

The next work was to find out how pneumonia is spread. Dochez and Avery made cultures of the mouths of contacts with pneumonia patients and in a large percentage they found pneumococci of the disease-producing type corresponding to the type of disease to which they had been exposed. These organisms persisted in the mouth for about 23 days on an average. They also found that the organism could be recovered from convalescence for a period of several weeks after recovery from the disease. It is clear from this work that carriers are very important factors in spreading the disease and are probably a great menace to the health of a community.

The next step was to find out if the disease-producing types were found anywhere else. Stillman in a recent article reports the results of the examination of dust for pneumococci. He first examined the dust from 62 rooms where no pneumonia had occurred and found pneumococci in 29 per cent., but they were all of the mouth varieties and in no case did he find a pneumococcus of Types 1 or 2 in the dust of a room in which there had been no case of pneumonia or carrier.

He then examined the dust from 183 rooms in which there had been cases of pneumonia. In these specimens of dust he found many pneumococci of the disease-producing types. The Type 1 organism was recovered 25 times and Type 2 23 times, and in each case the type was the same as that producing the disease. He also found that these organisms disappeared in a short time, usually before the carriers cleared up.

The next problem that suggests itself is, How often are pneumococci of Types 1 and 2 found in ordinary colds or bronchitis? but as yet there is no report on these experiments.

From these reports it is clear that the knowledge of the type of organism causing the disease

is of great value. In the first place a very satisfactory serum has been prepared by Rufus Cole for the treatment of Type 1 only, so if we are going to use the serum we must know the type as it is useless in the other types. In the second place, it is of great help in the prognosis as the mortality is so different in the different types. Third, if we are going to gain any knowledge of epidemics we must know the types. And finally, if we are to judge the effect of any treatment we must know the mortality of the type we are treating, as it varies from 6 per cent. in the mildest to 47 per cent. in the most severe.

The determination of the type is not a difficult process and can be done in any laboratory. The method is as follows: The washed sputum is injected into the peritoneal cavity of a mouse. At the end of 4 or 5 hours the cavity is washed out and a suspension made of the bacteria. This is then tested against known immune serum and determined which one of the known sera agglutinate the organism. This agglutination takes place in about  $\frac{1}{2}$  an hour, so the whole determination can be completed in a few hours.

#### CONCLUSIONS.

In summing up this work there are a number of facts which have been brought out which make us modify to some extent our views on the epidemiology of pneumonia.

1. The pneumococci found in the normal mouth produce only a small percentage of the cases and these are of a very mild variety.

2. The organisms belonging to Types 1 and 2 cause the majority of cases of pneumonia and are not found in the normal mouth.

3. Pneumococci of the Types 1 and 2 are found in the mouths of contacts and the type in the contact always corresponds with the type causing the disease. They are also found in convalescents for considerable time.

4. Pneumococci of the disease-producing types are also found in the dust of rooms in which there has been a case of pneumonia and here also they persist for many days, but ultimately disappear. This suggests that in many instances pneumonia may be an air-borne infection.

5. Finally the mere presence of disease producing pneumococci in the mouth will not initiate a pneumonia, but if a susceptible individual



comes in contact with a case, a carrier or infected dust, he is in grave danger.

5611 South Boulevard.

#### LITERATURE

1. Biologic Classification of Pneumococci by means of immunity reactions; Dochez and Gillespie, J. A. M. A., September, 1913.
2. A further study on the biologic classifications of pneumococci; Avery, Jour. Exp. Med., December, 1915.
3. Occurrence of carriers of disease producing types of pneumococci; Dochez and Avery, Jour. of Exp. Med., 1915.
4. Bacteriology and specific treatment; Rufus Cole, Arch. of Int. Med., 1914; New York Med. Jour., 1915.
5. Report of studies concerning acute lobar pneumonia; Rufus Cole, J. A. M. A., August 13, 1917.
6. Epidemiology of Pneumonia; E. G. Stillman, J. of Exp. Med., December 1, 1916.
7. Further study on the epidemiology of lobar pneumonia; E. G. Stillman, J. of Exp. Med., October 1, 1917.

### THE REMOVAL OF STEEL PARTICLES FROM THE INTERIOR OF THE EYE BY THE MAGNET.\*

FRANK ALLPORT, M. D.,  
CHICAGO, ILL.

The title of this paper indicates that I am to discuss the removal of steel particles from the interior of the eye by the magnet. I wish to say at the start that while it can be justly said that the magnet has been the means of losing some eyes by sympathetic ophthalmia, owing largely to unjustifiable efforts to save eyes that should have been enucleated, yet its enormous benefits toward ocular and visual salvation far outweigh any claims that can be made against it in the other direction.

No attempt will be made to narrate the history of the magnet in eye surgery, nor to explain its mechanism or action. Neither will I discuss the merits or methods of the various localizing devices or x-ray procedures, as all these subjects are matters of history and can be found in books on ophthalmology. I shall also not dwell upon the subject of particles of glass, copper, wood, etc., in the interior of the eye, for that is a large topic in itself and would consume more time than I am allowed. What we are most concerned about is how we can best serve the interests of those people whose eyes have been penetrated with steel particles, how we can save eyeballs under these circumstances, and how we can perhaps also preserve vision.

A large majority of such cases are caused by hammering (cutting steel by hammer and chisel) the flying particle, therefore, proceeding from

either the object being cut, the hammer or the chisel. Tools in good condition and not mushroomed or chipped on the ends are less liable to produce injury than tools in bad condition. Bad tools are sometimes the fault of the shop and sometimes the fault of the workman. It is important to find and preserve the flying particle as it may have an important bearing on subsequent litigation. It is strange that shop workmen plying trades inimical to eyes are so reluctant to wear Saniglass or other goggles. These glasses are unquestionably capable of protecting eyes from flying particles, and should always be used by workmen engaged in dangerous avocations of this nature.

Unless quite apparent, very few workmen believe there is anything in the eye after sustaining the injury, but such opinions are usually worthless and should be ignored. In all cases where there is even a suspicion of a foreign body being inside the eyeball x-ray pictures should immediately be taken, although it must be admitted that x-ray pictures are not infallible. I have been guided wrong in both directions. This is imperative for the benefit of the patient, the employer and the surgeon. Besides this, in case of litigation, the defendant and the surgeon should be able to say that x-ray pictures have been taken, or they will be likely to deeply regret such an omission. Two clear pictures should be taken, a front and a side view. In case a particle is seen these two pictures will indicate with reasonable exactness its location. They will indicate whether the particle is in the upper, lower or median plane; in which quadrant it is, and whether it is in the anterior, posterior or middle portion of the eye. (Most particles are in the vitreous chamber). The size, shape and long axis of the particle can also be seen. Sometimes, however, the particle is so far back that it is difficult or impossible by the x-ray alone to tell whether it is inside the globe or sticking in the retina, choroid and sclera, or entirely behind the globe in the connective tissue of the socket or posterior scleral coverings. If it is inside the globe the magnet will probably remove it. If it is sticking in the walls it may be impossible to dislodge and if so, will perhaps be best left alone, as, while floating particles are intensely dangerous, imbedded and stationary particles sometimes are comparatively almost

\*Read before the American Academy of Railway Surgeons, Chicago, Oct. 17, 1917.

harmless and are certainly less injurious than ill-advised, forcible attempts at extraction by intraocular operative procedures with forceps, probes, scissors, magnets, etc. In making this statement I am not unaware of the fact that eyes have been saved by Jackson's scissors operation, Conner's strabismus hook procedure, the intraocular introduction of magnet points, etc., but I am still firmly convinced that if a steel particle cannot be withdrawn by the contact of a very powerful magnet in the lips of an ocular wound, it had better be left alone, for the particle under these circumstances must either be behind the eye or stuck fast in its coverings, or encysted or tied down by adhesive bands, under which conditions it is safer to leave it than to heroically attempt to extract it, an attempt, by the way, which will probably be crowned with failure.

Steel particles are sometimes sterile when they enter the eye, rendered so by the heating which accompanies their forcible splitting from the main mass of the metal. Such particles may become encysted and apparently harmless for a time and then "flare up" and destroy one eye and perhaps both. Steel particles will sometimes go completely through the eyeball and be lodged in the fatty tissue of the socket or entangled in the posterior connective tissue of the sclera. Such particles are best left alone, but it may be extremely difficult to judge of their position by x-ray pictures unless they are located quite far back in the socket. Of course, antero-posterior measurements of average eyes can be compared with the eye in question, but even then the point may be so fine as to be hard to settle. Under these and other difficult conditions it is best to resort to Sweet's Localization Procedure or other similar devices, and, in fact, I believe it would be best if this method was *always* used, as we certainly cannot know too much about these widely differing cases. It is their very diversity that makes them so interesting, for hardly any two cases are exactly alike. Nevertheless, it may be said that well-taken x-ray pictures will, as a rule, give us sufficient information for operative intervention. It is unwise to use the magnet for diagnostic purposes. It creates much intra-ocular disturbance if steel is there and the diagnosis can be made by gentler and surer methods. Besides this, the approach of the mag-

net does not always elicit pain or movement even when steel is in the eye.

Much information can, of course, be obtained by carefully studying the eye, inside and out, by magnifying lenses, direct and indirect illumination, a small Wurdemann transilluminator, and the ophthalmoscope. The situation, character and size of the wound should be observed. As in detective work, all the evidence should be carefully scrutinized. The surface of the cornea and sclera should be examined for the wound or scar (if the wound is healed), the iris should be scrutinized for a tear, the lens for a cataract, and also for the wound or track of the steel particle. The interior of the eye should be carefully inspected through a widely dilated pupil, by the ophthalmoscope, for the steel, for the trail of the invader through the vitreous, and for a wound in the walls of the eyeball. All possible information should be obtained, and the operator should be master of the situation before operative procedures are begun. With this information well in hand he may then lay out his plan of attack.

It must be remembered that even though an eye shows a corneal, iris or lens wound there may be nothing in the eye, for it is possible that the eye may have been wounded by a long, slender spicule of steel that has penetrated clear through into the vitreous chamber and then been removed by the process of winking by the injured man or by someone else. So we must make sure there is something in the eye even though this seems almost certain by the physical appearance of the eye itself. It is strange how impervious to attack the lens is at times, for I have seen a very few cases where an extremely small piece of steel had gone completely through the lens (as shown by the track of the particle) dropped into the vitreous chamber, had been extracted by the magnet, and recovered with a clear lens and good vision. These cases are very rare but they do occur. It is also noteworthy how the refractive media of the eye will sometimes give an erroneous idea of the size of a foreign body when seen by the ophthalmoscope. I remember one case where I saw what seemed like an enormous, glistening mass in the vitreous chamber which proved when extracted to be a most minute particle of steel. The question in my mind is, how can this hap-



pen once or twice and not be a constant condition? After deciding there is a piece of steel in the eye and locating its position, the next question to be determined is, what shall be done about it? There are some cases where the steel is so large or the injury so extensive that all hope of saving vision, or even a presentable eye, might as well be abandoned from the start. Of course, under these circumstances a prompt enucleation is undoubtedly the sanest course to be pursued. An eye is only good for two purposes: first, for vision and second, for appearances. When both of these functions are manifestly lost, and the eye, in addition, is certain to become a menace to the other eye, it had best be removed. But unfortunately, the patient and his wife and his friends have something to say about the matter and it frequently happens that the surgeon is compelled to be guided by their ignorant and panic stricken opinions. It must never be forgotten that subsequent litigation is always visible on the horizon in these cases, and it is best not to absolutely force such situations. If, therefore, enucleation is advised and refused this refusal must become a part of the case record, must be properly witnessed and the patient and his misguided and protesting friends must be made to realize that they will be compelled to stand under the burden of the responsibility. If these procedures are made solemn and emphatic enough very few patients will refuse the surgeon's advice. If, however, they persist in refusing enucleation nothing remains but to remove the steel and await results. These are hard cases to handle because after the steel is removed panophthalmitis may *not* immediately ensue, the eye may for a time look fairly well, then soften and atrophy, remain red, irritable and painful, and thus drag along a precarious and tedious existence, and finally terminate in enucleation or sympathetic ophthalmia or both. The longer the patient retains the eye the more attached he becomes to it and the more he resents enucleative advice. Meanwhile he is an expense to himself and to his corporation, he loses time, becomes demoralized, and is a trial to everybody who has anything to do with him. He should have had his worthless and dangerous eye removed at the start, gone back to work in about two weeks and learned to become accustomed to his new conditions.

Magnet operations cannot be discussed without considering the question of magnets. There are magnets of all kinds to be had, large and small, strong and weak, stationary and portable. Of course, the giant magnet of Haab is the best large magnet on the market but it is very expensive and hard to get at the present time; there are not many of them in this country. The Victor Company makes a very good substitute and it is sufficiently strong for almost all cases. There is quite a variety of small and portable magnets to be had, devised by Hirschberg, Johnson, Sweet, Lippincott and others. Of these I believe Sweet's to be the strongest and the best and I think that if a surgeon is equipped with a Victor magnet and a Sweet magnet he will have all that he really needs. Some surgeons seem to think that the extraction of steel from the eye by a magnet is merely a pulling contest, or a question of pure magnetic force. This is not true. Force is, of course, necessary, but it should be properly and tactfully directed, as an operation of this kind may be one of the most delicate and difficult in the whole range of ophthalmic surgery. The steel must be removed with as little damage to the eye as possible and to do this often requires the acumen of the detective, the tact of the diplomat and the skill of the true surgeon. It is for this reason that a large and a hand magnet are necessary. The less the magnet power used, the less is the danger of sudden and forceful intraocular excursions of the steel fragment. The gentler the steel is removed, the better it is for the eye. Besides this, it is self-evident that a hand magnet can be much more dexterously used than the large Haab or Victor magnet. I believe it is best, therefore, to usually begin procedures with the patient use of the hand magnet; failing to get the steel, however, in this way, the large magnet must, of course, be employed. Large, unimbedded and unattached steel fragments will be about as readily extracted with a Sweet magnet as with a Victor or Haab magnet, but small or imbedded or attached pieces are better removed with the more powerful magnets. It does no harm, however, to first try the hand magnet.

While willing to grant that eyes have been saved by intraocular operative magnet procedures, I am convinced that such interference is, on the whole, unwise and that if steel can-

not be removed by contact of the magnetic point, to the lips of the wound, it had better be left alone for reasons already stated in this article. To feel satisfied, therefore, the surgeon must have a magnet of strength and reliability, and he should frequently, through the operation, test the magnet to be sure that the current is on. The hand magnet of Hirschberg is not very valuable, as it is too weak and does not attract steel appreciably unless it is brought into direct contact with it. This necessitates introducing the point inside the eyeball, which I believe should not be done, especially as there are hand magnets sufficiently strong to attract steel without intraocular introduction. A long, steady pull of the magnet is sometimes insufficient to attract the steel, especially if held back in any way, and then switching the current frequently on and off will sometimes produce the desired result; the current should be held *on* at the last, however, until it is ascertained whether the fragment is on the point of the magnet for if the current was left *off* at the last a small piece might be rubbed off and drop on the floor and be lost. It should not be forgotten that the longer and thinner the magnet point is, the weaker is its power. Whatever method of removal is decided upon, let it not be forgotten that the quicker the steel is removed, the better are the patient's chances. Therefore, operate at the very earliest possible moment.

A most important question is concerning the route of removal, whether it shall be the anterior route or the posterior route, or in other words, shall the steel be removed through the cornea or through the sclera? Haab insists upon the almost invariable corneal route and he has strong and numerous supporters. Some years ago when I, before the Chicago Ophthalmological Society, advocated the scleral route in most cases, my views were vigorously opposed. I am glad to say, however, that these views are receiving more and more endorsement. Of course, I lay no claim to being the originator of the idea. Haab claims that the anterior route is much safer than the posterior route, and that the particle can be drawn down to the anterior floor of the vitreous chamber through the Zonula of Zinn, up into the pupil and down into the anterior chamber. From here it can be extracted through a corneal opening without injuring lens or iris. Now, I

am not saying that this cannot be done. I have seen Haab, and others, do it. I have done it myself. I have seen it beautifully drawn in pictures, therefore, I know it *can* be done; but I say emphatically that it is not easy to do and that conditions must be exactly right for its successful accomplishment. A large particle cannot be delivered in this way without damaging the lens and other tissues and a small piece with sharp points will be apt to become lodged and do damage in its passage forward. Of course, fairly large pieces can come through the lens and pupil, and as the lens is usually damaged anyway, it really does not make so very much difference except that it increases the danger of secondary glaucoma, iritis, etc., by increasing the swollen condition of the lens, trauma, etc. But taking the most favorable view of the anterior route, it must be admitted that this method of removing steel particles from the interior of the globe necessitates the rapid and expulsive tearing of a rough and sharp pointed object through and over the most sensitive portion of the entire anatomy of the eyeball, and personally, I believe it is the most dangerous method of operating, especially in the hands of those who are not experts at this delicate kind of surgery. Haab evidently regards the vitreous chamber with sacred awe, but speaks reassuringly of the ciliary processes, the lens, the iris and the cornea. I would venture to somewhat reverse this idea, for I confess I stand in deadly fear of the anterior anatomy of the eye. I am not oblivious to the fact that scleral incisions and posterior deliveries may mean retinal detachment, infection, etc., but I do not think that these dangers are nearly as great as those involved in anterior deliveries. It should be said, however, that if the surgeon is determined to operate through the cornea he must use the strongest available magnet he can obtain, for only the strongest magnets are capable of drawing small particles of steel from the vitreous chamber into the anterior chamber.

I do not know how my method of procedure will please others, but such as it is, I will hereby give it, begging you to remember, that these cases are all different, and that they must be studied singly, and that all ideas and rules are liable to be broken at any time if conditions favor such variations.



1. If the steel particle is in the lens, or anterior to the lens, I extract it through the cornea. I make a peripheral incision, unless the corneal wound is still open. I make an iridectomy if the iris protrudes and if the lens is injured I squeeze, massage and wash out all the lens matter I can without inflicting too much interference. The original corneal wound, if still open, must be enlarged by sharp scissors, and if a peripheral incision is made it must be considerably larger than the foreign body. The corneal incision should be upward if possible.

2. If the steel particle is posterior to the lens I extract it through the sclera, especially if the original wound is still open; the wound must, of course, be somewhat enlarged, as a particle almost always requires a larger avenue of egress than it made in entering. Besides this, steel particles usually enter an eye by their long, narrow axis. I locate the steel by the x-ray and possibly by the localizer and make my incision as near it as possible. The speculum should, of course, be demagnetized. A triangular conjunctival flap is made with scissors, with its apex toward the cornea and the sclera is exposed. The incision in the sclera is made with a Graefe knife between two of the recti muscles, keeping away from the ciliary region. The incision follows the direction of the muscles, as it does not gape so much as it would if it was made in the other direction, and, therefore, heals much more readily. This also applies to the choroid and retina. Besides this, fewer blood vessels are injured and the hemorrhage is consequently less. The incision should be ample, as nothing is gained and frequently much lost, by endeavoring to pull and haul a large piece of steel through a small opening. It not infrequently happens, that even after a generous opening has been made, it will have to be enlarged by sharp scissors. The x-ray pictures should have been carefully studied and the direction of the long axis of the particle kept well in mind, for the magnet should be aimed in this direction, as the particle will be most energetically attracted to the magnet if its long axis and the aim of the magnet coincide. Besides this, the particle will be more easily delivered through a small opening if it comes out lengthwise. This is a matter of great importance, and should never be neglected. I have made trial after trial to extract a piece of steel. I have shifted my position from one angle to

another. I have almost given up in despair, only to be rejoiced at the last position by pulling the steel out easily with the particle and magnet touching each other end to end. The last axis was the right one, and all the others were wrong. It must be remembered, also, that the oftener a foreign body is knocked against the retina and choroid, the more injury is inflicted and the more the vitreous is disturbed. Therefore, each case should be carefully studied in every way and an effort made to extract the steel at the first attempt, with as little damage as possible and as gently as is consistent with efficiency. I have already spoken of the necessity, sometimes, of switching the current on and off to pull a particle loose from an attachment, and this procedure is not infrequently very efficient. I have also urged that instruments be not inserted inside of the eyeball, and I have devised two very small, sharp hooks (demagnetized) that an assistant can insert in each side of the flap to pull open the wound. The blunt point of the magnet can then be inserted within the opened wound, and it will then have better access to the foreign body. I only do this, however, after everything else has failed. It must be remembered that while the magnet strongly attracts steel, iron, nickel and cobalt, manganese steel is practically unmagnetizable, and will not spring to the magnet. After steel has been removed, or the attempt abandoned, the conjunctiva should be closed by a single suture. It is not necessary to suture the sclera, and it is dangerous on account of the force necessary to pass sutures through the tough membrane, which always causes some vitreous to escape. Besides this, the stitch inside the eyeball might produce infection. In spite of every precaution, however, and a highly satisfactory operation, the eye may eventually and perhaps quickly be lost.

7 West Madison street.

---

#### THE INTER-RELATION OF DISEASES OF THE EYE, THE NOSE AND NASAL ACCESSORY SINUSES, WITH REPORT OF CASES\*

E. C. SPITZE, M. D.

EAST ST. LOUIS, ILL.

The importance of the relationship between affections of the eye and diseases of the nose and

---

\*Read before the Southern Illinois Medical Association, November 2, 1916.

nasal accessory sinuses is being impressed upon us more and more as we continue to study and treat these cases. If we consider for a moment the close anatomical relation of these organs, the reason for this becomes manifest.

In the first place, we have a direct communication between the conjunctival sac and the nose by the way of the lachrymal canal, through which the infection can, and does, travel from the nose to the eye. Next we come to the sinuses. The frontal sinus adjoins the orbit at the junction of the superior and internal orbital walls toward the front. The ethmoid cells form a large portion of the internal lateral wall of the orbit posteriorly and the maxillary sinus is in direct relation with the inferior wall, the roof of this sinus forming the floor of the orbit. One can easily understand how purulent material from the sinuses, transgressing these boundaries, can penetrate into the various areas of the orbit. The optic nerve is in close relation to the sphenoid sinus and posterior ethmoid cells, often a thin plate of bone separating them, as has been demonstrated in a large number of sections made through the sinuses of many specimens.

The third, fourth and sixth cranial nerves are in close relation to the sphenoid, sinus and post-ethmoid cells. A considerable portion of the venous blood from the anterior sinuses finds its way into the ophthalmic vein through the supra-orbital, frontal and ethmoid veins.

The disturbances in the eye and orbit are brought about in one of three different ways:

1. By a direct extension of the inflammation or a passage of the infection from one to the other, as in lachrymal abscess, inflammation of the conjunctiva, corneal ulcers and inflammation of the optic nerve and retina.

2. By pressure. The pains and headaches are usually pressure symptoms. Choked discs and hemorrhages in the retina have been observed. You can readily understand that when one of these sinuses is filled with pus there will be some pressure on the surrounding structures. Swelling and puffiness of the eye, and even a proptosis or bulging forward of the eye may occur.

3. Toxemia. Many of these cases have a temperature above normal. Some of the headaches are no doubt due to the absorption of the toxins. Post-optic neuritis leading to atrophy of the optic nerve, and some of the motor palsies, such as

a paralysis of the accommodation or of the external rectus muscle, or even of the entire motor apparatus of the eye.

We must distinguish between eye conditions caused by some disease of the nasal sinuses and those referable to some other local or systemic trouble. Failing to recognize these important etiological factors, we find that our patients do not improve under the usual treatment, or they will improve somewhat after a few treatments, then remain stationary for a time, and then suddenly and from no apparent cause, while under active treatment, relapse into a condition as bad or worse than when treatment was first begun.

Or what is worse still, as in cases of ulcer of the cornea, postoptic neuritis, retinitis or swelling of the optic disc, valuable time will be lost in the delay occasioned by not recognizing at once the true cause of the trouble. Then, too, we must be able to determine to what extent certain symptoms such as inflammations, headaches, pains, lassitude, muscular imbalances and vertigo are due to some condition in the eye itself, and what portion can be referred to some nasal or sinus trouble, since in not a few cases, we find that both are at fault and each contributes a certain amount to the symptoms present. You can readily see that the whole subject of the relation of eye affections to diseases of the nose and nasal sinuses is of great importance, not only to the specialist in this line, but to the general practitioner as well. It is you who are often called upon first to treat these conditions and you should know why you fail to get results. Most of these cases come to the oculist because the aches and pains from which they suffer occur in and about the eyes, or not suspecting that they have some nasal sinus trouble, they blame their eyes for their suffering and seek relief through this source.

Many eye conditions are caused by diseases of the nose and accessory sinuses, from a simple tiring of the eyes in near work to severe inflammations, ulcerations, swelling and even blindness.

The ocular complications of nasal and accessory sinus disease may be divided into three principal classes: *Non-inflammatory*, *Inflammatory*, *Mechanical*.

1. Non-inflammatory or functional, such as weakness or imbalance of the muscles of accommodation or loss of accommodation, also palsies



of the recti muscles. In these cases the eyes tire quickly in near work and frequently there is a slight redness of the eyes and a feeling of moisture. "The eyes water," as they express it. They may or may not have headaches. On examination we find either no error of refraction or the error will be so slight an amount as to be negligible. Even making the necessary measurements with trial lenses aggravates them. Most of them, however, have real errors of refraction, hyperopia, myopia or astigmatism or a combination of either with astigmatism, but correcting them ever so carefully does not give them entire relief. They are not comfortable with the glasses or without them. At times they will go on for days and even weeks using their eyes in near work with comfort, then again they are miserable for a long period of time from the least attempt at using their eyes. These are the cases that go from one doctor to another, then to an optician for glasses, and then to an oculist, and if he does not at once recognize the true cause of the trouble but succeeds in giving them partial relief for a time by a little treatment or carefully fitted glasses, or both, they will try another oculist. And so they drift here and there, to the New Thought Healer, the Osteopath, the Electro Therapist, the Chiropractor, etc. They take aspirin, headache powders, liver pills, kidney balm, digestive tablets, dyspepsia cures, tonics and blood purifiers. They diet, take a rest, go to the country, but only to return to their work with their same old aches and pains. Some do get relief by a change of climate, for it is a well known fact that some nasal conditions do improve on changing climate or simply removing from the city to the country.

They complain of about all the different kinds of headaches imaginable. They may have just a heavy tired feeling about the eyes, pain between the eyes in the region of the frontal sinus and extending deep into the head, described as boring or throbbing in character. The pain may extend to the vault of the cranium, thence to the occiput or along the temples, down behind the ears and even to the shoulders and arm, depending upon the particular sinus involved.

2. Inflammatory. Many of the cases come under this class. In a conjunctivitis complicated by nasal sinus trouble, the symptoms complained of, such as pain, photophobia and lachrymation

are as a rule more severe than in ordinary conjunctivitis, while the purulent discharge is less than would usually be looked for with such severe symptoms. The blood vessels, both superficial and deep, are much engorged and the reaction of the pupil to light often very sluggish so that many of these cases give the picture of an iritis. A small drop of a weak solution of atropin will dilate the pupil widely but give very little added comfort to the patient. The usual remedies that are found so valuable in other forms of conjunctivitis bring but little comfort and improvement here, and very often weak solutions of silver nitrate, gr. 1 to oz. 1, or even sulphate of zinc in the same strength actually prove quite irritating. There is nearly always considerable injection of the conjunctiva around the cornea, and in not a few cases, some swelling of this area, simulating very much a certain type of the so-called vernal conjunctivitis or spring catarrh. At times these cases will show this inflammation and swelling only on one or two sides of the cornea, preferably the lower side. This is explained by the fact that the infectious material coming through the nose from the lachrymal canal lies behind the lower lid and the eye becomes macerated, as it were, from the pressure of the lid against the ball. The same thing happens with the upper lid, and I have seen cases of this type that resembled very closely a mild trachoma with pannus. The diagnosis is made by the absence of typical trachoma granulations and the so-called sago-seed deposits together with the presence of symptoms of nasal or sinus disease.

*Phlyctenular Conjunctivitis* and Keratitis, characterized by the appearance of one or more grayish elevations in the conjunctiva around the corneal margin or upon the cornea, is an eye disease of childhood, appearing at from three to fifteen years of age. Although slow in its onset, it is very severe in its manifestations, causing its little victims much discomfort and suffering. Usually monocular, it may affect both eyes. Inflammation, excessive lachrymation, photophobia and the formation of the small infiltrated elevations called phlyctenules (from a Greek word meaning blisters) are its chief characteristics. Many authorities claim it to be tubercular in origin. In the past these cases have always meant a long course of treatment, both local and general, and often tried both the skill and

patience of the physician as well as the endurance of the parents. Now that we recognize the true cause of the disease, by the aid of the rhinologist they are gradually relieved of their distressing symptoms as the nasal conditions improve and they recover in a comparatively short time with but little eye treatment, usually such as can be administered at home.

*Inflammation of the lachrymal canal* or tear duct with the accompanying abscess formation I believe to be almost always due to some nasal disease or defect in the nose, causing an obstruction to the free passage of tears, or by an actual extension of the inflammation from the nose into the tear canal. But little can be accomplished in the treatment of these cases without the co-operation of the rhinologist. With his aid most cases of epiphora, or overflowing of tears, are quickly relieved if properly treated in time, thereby avoiding an unpleasant complication, a lachrymal abscess and the resultant fistula if the abscess opens or is lanced. Several cases of lachrymal abscess have come under my observation in the last few years where it was possible to reduce the swelling and establish drainage through the nose by some well directed nasal treatment and a few flushings of the sac by injections, but without probing.

*Ulcers of the cornea and ulcerative keratitis* are frequently caused by nasal disease, and when they do appear in this connection are very persistent and often the ulcers multiply rapidly. They appear under almost any form and with or without hypopion, i. e., pus in the anterior chamber of the eye. But all cases are alike in that as a rule they do not get well until the nasal condition is treated and improved.

*Diagnosis.* The diagnosis of eye affections complicated with nasal disease is made by a careful study of each case. Every symptom must be traced from its first appearance to the present time. The location, time of onset, severity and duration, and what measures have given relief. Since the sinus disease may be further complicated by syphilis, tuberculosis or kidney disease, these must be thoroughly searched out or excluded as the case may be. Hence the Wassermann test, tuberculin reaction and urinalysis are of great importance whenever indicated. The one most complained of symptom is headache. This appears in all possible forms and degrees of

severity. Usually it begins in and above the eye, and may extend to any part of the head and even down the neck to the shoulder and arm. At first there is a dull ache, gradually increasing in severity until finally it becomes so severe as to almost make the patient frantic. The pains are deep in the head and boring in character, often causing nausea and even vomiting. Many give a history of having had nasal hemorrhage, either recently or at some time in the past, often many years ago. Others will deny having headaches, but will admit on close questioning that they do have some pain in the head. Again other cases will give no clinical history excepting the eye trouble and the diagnosis must be made from the findings in the eyes and by exclusion.

When only one side is involved, the aches and pains will be referred to that side. This is an important sign and often points the way to a correct diagnosis. While most eye diseases caused by a direct infection or by some systemic trouble sooner or later affect both eyes, most eye troubles caused by nasal or sinus disease are monocular in character. Lying down and closing the eyes usually does not bring relief, but on the contrary, often aggravates the condition. A splendid history of sinus disease was given me a few months ago by a lady seventy years of age, when she stated that for thirty years, from the time she was twenty, she suffered with very severe headaches in the right side. They would begin just above the right eye and extend only just back of the eye and into the temple. At first the attacks came on only about every six months, then five months and so on until she had them every six weeks or more often. She said they were so severe and persistent that the only thing to give her relief was morphin and atropin in doses sufficient to "lay her out," as she expressed it. Many remedies had been tried, including keeping the pupil dilated with atropin, injecting the nerve with alcohol, leeches and blisters to the temple, hot and cold applications and various forms of internal medication, but all to no avail. The attacks ceased when she was fifty years old.

These conditions often follow an attack of the gripe or a "cold in the head." The diagnosis is complete when the rhinologist finds the condition in the nose or the sinuses which is causing the eye trouble. And here is where good team work is necessary. You must know your rhinologist



and be sure that he is really able to diagnose a sinusitis and whether or not there is a suppuration.

*Prognosis.* This depends entirely on the treatment of the conditions in the nose or the sinuses. When the true cause is recognized and properly treated, improvement begins almost at once and complete recovery is the rule. In old, chronic conditions where the nasal treatment is begun too late, or in cases of the aged and feeble, where proper nasal treatment cannot be carried out, the prognosis is very doubtful, and at times the vision, or an eye, is lost.

*Motor Paralysis.* Miss C. G., aged 8 years. Two months ago right submaxillary gland is swollen so that the family physician made a diagnosis of "possible mumps." Five weeks ago had an ear ache and pains in the right temple. Was out of school for ten days. No treatment. Two days ago had diplopia and eyes crossed. Examination showed diplopia of 20 degrees. Paralysis of the right external rectus muscle. Given calomel gr. 1/10 every two hours. Next day complete paralysis of right rectus muscle. Examination by rhinologist showed acute bilateral sphenoid sinus suppuration. Confirmed by Dr. G. Sluder of St. Louis. After four daily nasal treatments the eyes were straight and diplopia disappeared.

J. S., aged 31 years. Boiler maker helper. Foreign body had lodged in right eye a week ago. Two small foreign bodies removed from cornea. Examination showed a partial ptosis of upper lid of right eye which turned slightly up and out. Vision equaled 20/40. Ophthalmoscope showed nothing to account for lowered vision. Had taken a cold and was feeling sick. Was given aspirin gr. 5, and calomel gr. 1/6 every two hours. Next day much improved and returned to work. Three weeks later returns, much worse. Right eye rotates outward only. Complete ptosis of upper lid. Pupil dilated and does not react to light or accommodation. *Diagnosis.* Complete ophthalmoplegia, externa and interna. (Paralysis of the third cranial nerve.) Patient now quite deaf in right ear. Pains in right temple. Right side of nose partly obstructed. *Diagnosis, Sinusitis.* Rhinologist found a right sphenoid sinus suppuration. Give K. I. gr. 10 t. i. d. One week later not improved. Sphenoid and ethmoid sinuses opened. Three weeks later pains in the head entirely gone. Some action of the upper eye lid. Eight weeks after operation, some action of all eye muscles. Three months after operation vision normal, right and left. Much better action of eye muscles.

*Case Reports.* Miss M. M., aged 3 years. Marked chronic conjunctivitis of the left eye. There was considerable photophobia and excessive lachrymation, patient carrying the head down and holding the hand over the eye. Conjunctiva of globe much congested and a little thickened around the cornea. Pupil reacted to light. There was a purulent discharge from

the nose, left side. Nasal examination showed enlarged tonsils and adenoids. One week later adenoids removed. Improvement of the eye very slow until the discharge from the nose had about disappeared. Two months later patient returned with eye much worse. Superficial keratitis in upper half of cornea. Patient had taken cold and the suppurative rhinitis which was present with the adenoids had become aggravated. This is a typical case of this class. The eye recovered just as soon as the nasal condition returned to normal, which it did under proper treatment.

Miss D. P., foreigner, came in March 15, with a marked chronic conjunctivitis and ulcerative keratitis. The eyes were much inflamed, photophobia and lachrymation so that patient could hardly find her way alone. Again there was that characteristic thickening of the bulbar conjunctiva which is so often found in these cases. Appropriate treatment for the eye was ordered. She had a purulent discharge from nose and nasal examination was advised at once. However, this was not done, and patient returned twelve days later with the eyes no better and a recent ulcer of the cornea of the left eye. Nasal examination showed a purulent rhinitis. After four nasal treatments, over a period of ten days, the left eye, which was the worse, had very much improved as also had the left side of the nose and she made an uneventful recovery under home treatment.

Miss V. D., aged fifteen years, was brought in February 28, from Carlyle, Illinois, with the history that the right eye had been very sore and painful for two weeks, and that daily treatment by the home physician had given no relief. The right eye was very much infected, pupil adherent to the lens capsule. Grayish exudate in anterior chamber. Patient very uncomfortable. Pupil dilated irregularly with atropine. Calomel, gr. 1/10 every two hours ordered and atropin and acid boric for instillation in the eye and bandaged. Two days later anterior chamber clear. Pupil widely dilated and round. Deposit of exudate on anterior lens capsule. Improvement continued nicely for two weeks and it was decided to let her return home, but three days later she returned with the eye almost as bad as when she first came. There was a drop of yellowish pus in the anterior chamber. This sudden return of the trouble made me very suspicious of the nasal involvement since it was clearly a toxic condition, carried through the lymph channels. Examination of the nose showed a purulent rhinitis on the right side, with, however, very little discharge from the nose. With a little nasal treatment the whole condition cleared up and in two weeks the patient returned home to resume her school work. One month later her sister reported patient had no further trouble.

Miss M. H. School girl, aged thirteen years, in good health, vision failed rapidly Friday at school. On Sunday, October 6, right eye vision fingers at two feet. Left eye vision 20/200. Ophthalmoscope showed choked disc right and left. Gave a history of having nasal catarrh. No pains or headaches. No

supra-orbital tenderness. No history or other symptoms of lues, tuberculosis or brain tumor. Diagnosis, sinusitis. Examination showed sphenoid sinus suppuration. Daily treatments for four days gave no relief, so on fourth day, October 10, the sinus was opened. Next day, right eye vision equaled fingers at five feet. Second day after operation, right eye vision, fingers at ten feet, left eye vision, 20/100. Ten days after the operation right eye vision 20/200, left eye vision 20/80. November 19, right eye vision equaled 20/20. Left eye vision 20/20, plus.

*Mrs. C. V. V.*, aged thirty-eight years, referred May 19, 1914. Has twins three weeks old, healthy. Always in good health. Blurring of vision past week. Right eye vision 20/30. Left eye vision 6/100. Ophthalmoscope shows right eye normal. Left eye central retinitis with exudate and a few small hemorrhages. No history of lues, kidney troubles or tuberculosis. The doctor had made frequent urinalyses for some weeks, all of which were negative, and since the condition was monocular a diagnosis of sinus disease was made and nasal examination revealed a sinus suppuration. She was given proper nasal treatment and in three weeks right eye vision equaled 20/20, left eye vision 20/30. Later left eye vision 20/20.

*Mrs. G. G. S.*, aged twenty-nine years. A large robust woman in good health. First noticed blurring of vision of right eye four days ago. No pain. Right eye vision 20/200, left eye vision 20/40 plus. Compound hypermetropic astigmatism in the right eye. Retinochoroiditis in macula  $1/8$  inch in diameter. Diagnosis, sinusitis. Purulent sinusitis found. On opening sphenoid sinus no pus seen to escape but when the posterior ethmoid sinus was opened there was a free escape of pus. Eighteen days later right eye vision 20/24. Area of retinitis pigmented.

*Miss L. J.*, aged twenty-four years. Referred May 14. Stenographer. General good health. Figures blurred with right eye for a week. Several visits to Dr. P. unsatisfactory. Nose and throat examined by Dr. S., but no diagnosis. Right eye vision 20/40, left eye vision 20/20 plus. Ophthalmoscope shows a very small area of subretinal exudate between disc and macula. Diagnosis, sinus trouble, and rhinologist reports a swelling in olfactory fissure. Treated. Hydroarg. chlor. corros. gr.  $1/14$  t. i. d. One week later right eye vision 2/80. Right post-ethmoid and sphenoid sinuses opened. Next day vision 20/30. Later 20/24 and remained. Scar at site of trouble in retina.

## THE MANAGEMENT OF SQUINT.\*

ROBERT VON DER HEYDT, M. D.,  
CHICAGO.

This subject, I think, is of great importance and I will endeavor to outline proceedings which may appeal because of the simplicity of their application, and especially as they call for little to do on the part of the parents. Too many

duties imposed on the latter soon lead to the discontinuance of all efforts. Many of these are misdirected, as for instance, the often so superficially suggested occlusion of the fixing eye, therefore, so rarely practiced with any result. Also the use of the amblyoscope—at first an interesting toy soon discarded and of no value in cases of children. An adult mentality and extreme demands on patience and perseverance are necessary for its successful use. I am further sorry to see cases now and then where prisms have been prescribed by incompetent ophthalmologists—surely a miscarriage of therapeutic effort.

Parallelism of the visual axes in the infant is only an approximate one, a part of nature's efforts at facial symmetry.

Worth very correctly says that the motor co-ordination power of the ocular muscles keeps the eyes approximately straight in the absence of any disturbing influence until the fusion center begins to develop, which is at the end of the sixth month, and the latter is not fully developed until at the end of the sixth year. Under normal conditions, therefore, permanence is only brought about by the education to macular fixation of both eyes plus fusion of the images. The development of these functions brings about binocular vision and by means of it absolute orthophoria is maintained. The latter, existing for years or almost a lifetime, may be lost when binocular vision is no more possible, as for instance in the loss of vision in one eye later in life, so that a squint may develop. In order to bring this about a tendency toward strabismus—a muscle imbalance must have been present.

This "phoria" was overcome by the visual acuity which held the eyes in parallelism. Now, with the vision of one eye lost, a deviation is the prompt result.

In our observations on strabismus let us first exclude alternating squint in which cases we find good vision and fixation in each eye, but the muscular imbalance of more than usual high degree thus favoring alternating suppression of the images, also the well understood cases of squint in high hypermetropia where the accommodation necessary to overcome it brings with it an excessive convergence and thus produces a periodic and later a permanent inward squint. These latter cases are promptly corrected by the early adjustment of correcting lenses to be worn con-

\*Read before the Chicago Ophthalmological Society, Oct. 15, 1917.



stantly, thus correcting the refractive error, bringing about perfect fixation and fusion, therefore, stereoscopic vision and inhibiting the impending development of amblyopia in the converging eye.

It is the other kinds of squint I wish to consider. The kinds that are less easily handled.

The first three or four years of life present the critical period in which so much can be done to assist nature in establishing permanent ocular parallelism. This can only be accomplished by a thorough and early study of each case and its possibilities based on a full understanding of the etiologic factors producing them.

About these more obscure cases it may be said in short that any factor present in one eye, that retards the development of fixation or makes it less accurate in that eye, as for instance, anisometropia, monocular high astigmatism, amblyopia or any lowered visual perception in it from any cause, will retard the development of fusion and make it impossible. This in itself, the inability to learn fusion, because of the lowered fixation qualifications of one eye, will not in itself necessarily give rise to a squint, it will only predispose. If, however, we have added thereto in the same pair of eyes a tendency to deviation from any cause, a muscle imbalance, the development of a strabismus is inevitable.

Therefore, expressed in other words, the visual undervalue of one eye plus a tendency toward deviation will bring about a squint. These cases are common, difficult to handle and therefore often neglected. Early attention is most important. Delay favors the development of monocular vision, the one eye increasing its visual value by taking the work onto itself, the other learning more and more to suppress. With amblyopia, exanopsia gradually increases the difference between the two eyes, until nothing more can be done to coax back the reduced visual acuity.

Our first step in the proper handling of the case is to win the confidence of the child so that a careful retinoscopy can be done under a cycloplegic. It is best to introduce the child to the darkroom at the time of the first visit and give a few flashes with the mirror which proceeding is as a rule sufficient to avoid future rebelliousness.

When the retinoscope discloses a sufficient re-

fractive error to reduce visual acuity or hypermetropia calling for several dioptries of accommodative effort, glasses should be given.

A period of sufficient length to enable the parents to teach the child the recognition of numerals is now allowed until the next visit. This is done whether glasses are given or not. This enables us to make accurate record of the visual acuity of each eye, as on this factor is dependent the character of our efforts and by means of it we may measure progress in the management of the case.

The visual acuity of each eye with and without glasses, also how much that of the better can be reduced by a cycloplegic must constantly be in mind for the purpose of intelligently studying the squinting eye, its possibilities and later the improvement in it. The use of atropin in the good eye to force the use of the mate is an old practice and I plead only for the recognition of its limitations and its application in the selected number of cases which can be modified by this method. Results can only be obtained if we really force the use of the bad eye and we can only do so if we succeed in making it temporarily the better eye of the two by the cycloplegic's action on its mate.

What good would it do, for instance, to thus lower the visual acuity of the good eye for a period of months or years, as is often done, if in spite of this blurring it still would remain the one with best acuity?

Therefore, the necessity of studying the visual acuity of both eyes under various conditions.

If atropinization of the good eye is sufficient to make it the secondary eye, I order its use according to the calendar in the following manner: for instance, beginning January 1 a drop twice daily for three weeks, then stop and come in last week of February. Resume March 1 for three weeks and continue in a like manner. If advisable I deprive the better eye of its correcting lens during the atropin period and substitute a smoked lens. This calls for the use of cycloplegic about half of the time, or even a longer period can be adopted, and makes it necessary for the patient to make only six visits per annum.

Parents will persevere as a rule if you make it reasonably easy for them.

I have in some cases continued the use of monocular cycloplegia beyond the sixth year and during school time ordered homotropin on Saturday and Sunday. If these methods cannot be adopted owing to the low visual value of the squinting eye, some method of occlusion may be tried. I use periodically a hollow black patch with adhesion strips, so arranged that there can be no "peeking." A definite schedule is given to be rigidly enforced.

Some cases are hopeless and must await later years for mechanical adjustment by operative proceedings, but many may be saved this necessity; disfigurement will be avoided by returning and holding a squinting eye to parallelism to say nothing of making it a useful one by methods somewhat on the order I have suggested and, owing to the limitations of time, outlined in so brief a manner. I will add an interesting case illustrating heredity in three generations:

Grandmother has marked exophoria, divergence under cover, but parallelism with glasses correcting the refraction. The mother has exactly the same condition. The father brings to the family eyes with practically normal vision in one eye and a very high degree of astigmatism in the other; no muscular imbalance. This refractive condition is transmitted to the child from the father and the exophoria from the other side. The astigmatism of the one eye uncorrected was changing the exophoria into a periodic exotropia, divergent squint. The threatened permanent strabismus I have succeeded in avoiding by bringing up the vision of the highly astigmatic eye by a proper lens, illustrating what can be done toward binocular vision by aiding an eye handicapped in fixation by reduced visual acuity.

In a case of convergent squint in high hypermetropia existing for one and one-half years with marked amblyopia exanopsia by the use of atropin in the fixing eye for several years, according to the calendar system outlined before, I have measurably raised the visual acuity of the squinting eye and finally brought about parallelism.

Perseverance and the adoption of a definite system, if the latter will not impose too many duties upon the parents, will lead to surprisingly favorable results in the many cases so often left to permanent strabismus.

## SOME MEDICAL AND SURGICAL PROBLEMS OF PROPHYLAXIS IN ECLAMPSIA.\*

W. H. CONDIT, B. S., M. D., F. A. C. S.

Instructor Obstetrics and Gynecology, University of Minnesota Medical School.

MINNEAPOLIS, MINN.

*Introduction.* There is no more fascinating and interesting subject in medicine, unless it be cancer, than the toxemias of pregnancy, and it is no doubt the mystery still surrounding the etiology that makes it so. The word eclampsia, more properly eclampsia (Kossman), is of Greek derivation from a word meaning "to flash," to shine out brightly, and as used today, covers such a "multitude of sins" that the term should be absolutely lost in the light of the modern surgical-obstetrical era. A much more appropriate and scientific term to apply to this dreaded condition of the pregnant woman, would be, convulsive or comatose toxemia, for surely there is nothing bright or shining in the storm of symptoms that usher in this condition, nor is the affliction one that comes as a flash, for if the patient has had proper supervision there are many signs and symptoms that exist, to warn of the approaching danger. The writer believes that convulsive or comatose toxemia is a preventable complication of pregnancy if the patient is under constant, skilled care and observation throughout the entire antepartum period, the advantage of which is surely due every pregnant woman.

*Etiology.* From Hippocrates' time, students have been searching for the toxin or toxins causing this condition, but to date we are still in the dark. The etiological agent has been found in faulty liver metabolism, in the mysterious endocrine gland system, in nervous irregularities and a thousand other sources, but final analysis has disproven all theories. May the cause not be in the ingestion of a certain meal, or one article of food, or even in an emotional stimulation, anything that may disturb the balance of the metabolism in the physiological machine? Every physician has heard his pregnant patient make some such remark as: Doctor, I had such a craving for grapes I ate a whole basket of them today; or, I was so hungry for something acid I ate a dozen of oranges yesterday; or more fre-

\*Read before the Chicago Medical Society, Oct. 17, 1917



quently, I had such a hunger for sweets I punished two pounds of chocolate creams the other day. Who can say but that some such intemperance acted as the spark in the powder can? Lossee and Van Slyke conclude that toxemia of pregnancy cannot be attributed to failure in diaminization of the amino acids, nor to a moderate degree of acidosis which is present. The constancy of the low urea ratios in the urine of convulsive toxemia (eclampsia), and the high ammonia in the urine of pernicious vomiting, indicate that the nitrogen distribution of the urine is a most valuable element in the diagnosis of toxemias of pregnancy. It is the rare and unusual forms of toxemia that throw us off the track, that some skilled physiological chemist has constructed for us; for example, the choreic types, polyneuritis, the thyroid complex types, brain pressure, and the ones ushered in by emesis gravidarum in the first months of conception; even climatic and barometric conditions have been credited with causing of eclampsia.

How can we explain such statements as Schmidt made when he said, "It is more than a mere coincidence that six women succumbed to eclampsia in his service in 1912 while only three in seventeen died during 1911, although all were treated on the same principles"? In 98 cases, 1907-1912, 23.47 per cent. died. This is quite conclusive evidence that each case is a law unto itself.

#### *Age and Frequency of Convulsive Toxemia.*

Schultz reports from studies in the Colonial Hospital, Trinidad, that the age has no import, as the condition developed in patients from 14 to 42 years of age. In the Port of Spain they occurred one in 58.64, and in the entire colony of Trinidad one in 99.36. The ratio of eclamptic cases to the number of deliveries was one in 23; in twin pregnancies, one in 10. He remarks that it was interesting to note that most of the patients admitted to the hospital lived upon an exclusively vegetable diet, so that the use of meat had no part in causing albuminuria or convulsive or comatose toxemia. More than one-third of these patients had their convulsions after the birth of the child. Mortality for the mother was 22 per cent.; for the fetus, 34 per cent. Statistics are so unreliable, the writer feels like apologizing for quoting them, but two

points in the above report deserve close study and consideration. First, the large group normally vegetarians; second, the high maternal mortality and large number of cases suffering from convulsions post partum, a condition to be deplored and doubtless due to inability to observe the cases early and all through pregnancy, for proper prophylaxis would eliminate all post partum convulsions.

There is no doubt that the past year has been an unusual one for frequency of this condition. It was a subject of remark among the members of the American Association, meeting at the last congress. All the large clinics report an increase in the number per 100 cases. The writer was impressed with the unusual number in his private practice the past five weeks; two requiring premature induction of labor and two cases visited in consultation; the first of these, spontaneous labor began two hours after consultation; the other required induction of labor at eight and one-half months.

Our experience, in the small clinic at the University of Minnesota, where 640 cases were delivered the past twelve months ending Oct. 1, 1917, is no less startling. After a period of seven years with but seventeen cases of toxemia, we had a series of thirteen cases with one death in the period of seven months ending Sept. 26, 1917. The fatal issue occurred in a case that was comatose on entering the hospital and never rallied, even after rapid emptying of the uterus. Our record of thirteen cases of toxemia in 343 (229 in hospital, 114 out-patient department) pregnancies, covering a period of seven months, following a series of but seventeen cases in 3,326 (1,878 in hospital, 1,448 out-patient department) pregnancies, surely provides a subject for serious consideration.

#### TRTAMENT

*Prophylactic.* Any attempt at classification of the toxemias of pregnancy for treatment would be only confusing; each case should be considered as a possible case demanding conservative or perhaps heroic treatment. We have concluded, after studying the blood pressure of all our cases at the university clinic the past two years, as well as our private cases, that in the elevation of the blood pressure we can find our first danger signal. The blood pressure should be determined in each patient as soon

as pregnancy is suspected, in order to have, as near as possible, the normal pressure of the patient, independent of the pregnant state. It then should be carefully taken every three or four weeks, together with careful analysis of the urine. If there is a suggestion of an elevation of the systolic reading the pressure should be taken more often, and in event of rapid, steady rise, taken every day or two. A systolic pressure of 160 suggests approaching danger; 180 is serious; 180 with diastolic of 100 or below is alarming, and if with this finding and appearance of albumin or casts, or both, with headache, disturbed vision, nausea and restlessness, labor should be induced immediately, but be not too hasty. "Accouchement force" in such cases is a dangerous proceeding, the shock alone attending may defeat entirely the results possible to attain by a more conservative, gradual induction of labor.

The following synopses of three cases will serve to illustrate the two points the writer wishes to present, namely, the importance of constant observation of the patient as a prophylaxis against convulsive or comatose toxemia and the value of conservative, slow, methods of emptying the uterus as compared with accouchement force.

*Case 1.* Patient of dark complexion, aged 27 years; normal weight, 116 pounds, 2 para. History negative for fevers of childhood or adult life. Married 6 years; first child, male, weighed 6½ pounds at birth, normal delivery and puerperium, child living and well. Second pregnancy, three years ago, went two weeks over expected time of maturity, gained weight to 166 pounds and had marked hydramnion. Presentation breech, child lived but sixteen hours, cause of death undetermined, as patient was cared for by Christian Science methods, but was known not to have had any kidney complications; blood pressure was never taken. Up to the seventh month of the third pregnancy the urine finding remained negative and blood pressure normal. At this time domestic troubles arose and patient had much worry and loss of sleep. I watched her with unusual alertness and four weeks before labor began, headache and unusual nervous sensitiveness developed; blood pressure arose to systolic 145; rest in bed and restricted diet failed to make any impression on the rising blood pressure and a trace of albumin appeared. The blood pressure continued rising ten points every four days to 180 systolic; 110 diastolic, with a proportionate gradual increase in albumin in the urine. Eight days before expected maturity I planned to induce labor and began by the mild method of one ounce of castor oil and ten grains

of quinine sulphate. Patient was complaining of excruciating migraine. Labor pains began mild at midnight ten hours following the above therapy. Nitrous oxide and oxygen was begun at 8 a. m. following day, and female child of 7½ pounds delivered at 12:15. Patient complained of the severe migraine throughout her labor and the blood pressure reached 210 systolic, 125 diastolic before delivery was complete, remaining at this point for one hour when it began a gradual decline, reaching 140 systolic; 90 diastolic, 24 hours following delivery. On the 9th day (Sept. 29, 1917) following delivery, blood pressure is 130 systolic, 85 diastolic, with urine free from albumin and casts.

*Case 2.* Patient dark complexion, aged 24 years, weight 140, married three years, 0-para. History negative for any illness of childhood. Tonsillectomy at age of 13. One uncomplicated induced abortion two years ago; date of expected confinement, Sept. 8, 1917. At the end of the second month of pregnancy, patient suffered an attack of so-called ptomaine toxemia, accompanied by vomiting, abdominal pain and diarrhea. Three weeks following this attack she developed an otitis media of left ear. Paracentesis was performed, with uncomplicated recovery from the infection. Blood pressure remained normal and urine negative. Twenty-five days before date of expected confinement, blood pressure reading was systolic 152, diastolic 100, albumin ++. The following day the systolic pressure was 170, diastolic 110. The pressure rose ten points daily the following three days, when slight edema about the eyes developed, mild migraine and the characteristic sweet odor of the breath. Three No. 17 bougies were introduced into the uterus Aug. 12 at 5 p. m. Mild pains began at 7 p. m. Membranes ruptured at 9 p. m. Nitrous oxide anesthesia was begun at 12:45 a. m., and two hours following a male premature child was born weighing 4 pounds, 3 ounces. One and one-half hours after delivery the blood pressure had dropped 25 points, and continued falling 5 points daily, on the tenth day reaching 130 systolic, 98 diastolic, and at the end of the second week post partum 120 and 79. The albumin seemed to diminish in proportion to the lowering of the blood pressure, but it did not totally disappear until the end of the fourth week. At present writing, seven weeks post partum, patient is in the best of health, nursing her babe, which weighs 6½ pounds.

*Case 3.* Patient, light complexion, aged 23 years, weight 110, married two months, gravida i; history negative for fevers or illness. Urine analysis negative and blood pressure normal. Albumin appeared in the urine the middle of the third month of pregnancy with slight rise of blood pressure. Patient was provided a restricted diet and increased rest each day, but it made no impression on the progress of the toxemia. She was then put in bed on a milk diet with slight improvement, and allowed up again with restrictions. Increased symptoms again appeared and patient was put in bed on a liquid diet for four weeks, but in spite of the treatment, the albumin increased at an alarming rate, casts appeared and the blood pressure went up



to 220 systolic, 150 diastolic, accompanied by marked edema of face and ankles, almost total blindness and marked migraine. As is usual in such cases, the patient was so anxious for a child she was almost willing to chance her life, but, of course, there was nothing to justify such a sacrifice. Three bougies were inserted in the uterus; 11 hours following, labor set in and delivery of a non viable fetus resulted 10 hours following onset of labor pains. In the first 24 hours following emptying of the uterus, the blood pressure fell fifty points and continued its downward course rapidly, accompanied by a proportionate decrease in the albumin, until at the end of three weeks the condition of the patient was quite normal except for the impairment of vision. This condition was six weeks recovering to normal. The patient no sooner recovered her normal state, when she wished to try it again, but I feared a repetition of the first experience and set about building the patient up and attempting to educate her to an even walk of life, as she had an impulsive temperament and went to extremes in many ways. I remember asking Dr. James Markoe, of the New York Lying-In Hospital, what reply he gave his patients when they asked how soon they could again risk pregnancy following an attack as above described. He replied, "As soon as you can build them up to an average physical resistance, for who knows but that the previous attack was due to one meal or to one article of food?" Two and one-half years following therapeutic abortion on this patient, I advised her she could try again. The blood pressure and urine was analyzed every week during this pregnancy, with negative findings throughout, remarkable gain in weight to 140 pounds and exceptionally good health. Thirty-two days before expected maturity patient presented with a trace of albumin and an elevation of systolic blood pressure to 140. The patient was not informed of any irregularity, but under pretense of guarding her against any accident the last month, I succeeded in placing her upon a restricted diet and more rest, without giving any concern, thus preventing any nervous reaction. The albumin did not develop beyond a trace, too small for quantitative estimation and the blood pressure did not go above systolic of 150. Patient had a normal delivery, after 13 hours of mild pains and two hours of labor under nitrous oxide-oxygen administration, convalescence uninterrupted.

In the analysis of the above three cases, illustrating the mild, medium and extreme type, we have graphically pictured what advantages obtain in the careful study of our patients throughout the antepartum period, and a practical illustration of the conservative method of emptying the uterus compared with the accouchement-forcé or hysterotomy method.

The author takes the liberty of speculating or making a guess on the possible etiological factors entering into the three recorded cases.

*Case 1.* Patient passed through two months of domestic trouble, associated with alcoholic intemperance and infidelity of husband, coupled with attending unpleasantness and worry of private detective service. Could not the toxemia have been of nervous origin?

*Case 2.* Patient suffered an attack of food poisoning (so-called ptomaine toxemia) and in four weeks an attack of otitis-media (suppurative), either one of which can very easily be credited with being the cause of the disturbed metabolism.

*Case 3.* Patient, of impulsive, erratic temperament, would sit up half of the night on some puttering foolish task at hand, and was a victim of perverted appetites; she ate ten oranges in one day and a basket of grapes on another, either stunt sufficient to act as a monkey-wrench in the machinery.

*Medical Treatment.* The management of toxemia of pregnancy will naturally vary according to the degree or severity of symptoms affecting the mother and to the effect of the method or methods adopted upon the life of the child. Again, we will be influenced by the condition of the fetus, whether the child is viable in utero, dead in utero or delivered. The therapy must be directed at, 1, elimination of the toxine; 2, control of convulsions, if present, and, 3, the emptying of the uterus. The treatment must be directed to the vascular system where the toxine or toxines are being distributed to the organs where the characteristic symptoms appear, such as nephritis, jaundice, blindness, headache, edema of the lungs, infarcts in the placenta, convulsions and death of the fetus in utero. If faithful observance of the suggestions made in the prophylactic treatment be carried out, the medical therapy will be simple enough, as the symptoms and conditions will be of such mild character as to require only correction of diet, rest in bed for a time and the increasing of elimination through the natural channels, namely, bowels, skin and kidneys. If we fail to make an impression on the elevated blood pressure or on the other existing symptoms more heroic methods must be adopted. In our clinic we use what is known as the Stroganoff method, with the modification that we administer veratrone or veratrum, as indicated, to reduce the blood pressure while preparing for

emptying the uterus. Stroganoff first published his method in 1900 and was considered the most important contribution on the subject of the management of convulsive toxemia (eclampsia) that has appeared since Veit reported his success with morphin. The following is his routine drug treatment:

	a. morphium muriate.....	0.015
In 1 hr.....	b. chloral hydrate.....	2.0
In 2 hr.....	c. morphium muriate.....	0.015
In 4 hr.....	d. chloral hydrate.....	2.0
In 6 hr.....	e. chloral hydrate.....	1.5
In 8 hr.....	f. chloral hydrate.....	1.5

This is the usual treatment covering a period of 21 hours. The Stroganoff method aims at reducing to a minimum the irritability of the nervous system. Delivery is hastened as necessary and fluids are supplied by rectum or mouth from 150 to 250 c.c. four or five times daily. There is no fast rule for the size of either the dose of morphin or chloral; the dose must be established for the individual case in accordance with the reaction from the initial dose. He uses chloroform at first after the first dose of chloral until the effect of the chloral is noted. Great care should be exercised in the use of chloroform in any case of toxemia of pregnancy as it may precipitate a liver pathology, present in so many toxemia cases, that might be suddenly fatal. Spaulding has recently reported a series of 20 cases from the clinic of Stanford University Medical School, together with an excellent review of different therapeutic methods.

*Surgical Treatment.* The rapidity with which symptoms of convulsive or comatose toxemia disappear on emptying the uterus, is sufficient evidence that in advanced toxemia the uterus should be evacuated as soon as possible. There is such a variance of opinion as to the proper method of procedure in such cases, that nearly every operation known in obstetric science has been advocated. Vaginal hysterotomy; abdominal hysterotomy (Caesarian); decapsulation of the kidney; lumbar puncture; venesection, have all been advised. The conservative medical and surgical treatment will give the best results, but if the observation be carried out, as suggested, in the early antepartum period, we will not be confronted with the problem of selecting the best medical or surgical emergency treatment. Dr.

Geo. L. Broadhead has a very interesting review of "The Treatment of Eclampsia With Special Reference to Vaginal and Abdominal Section" in the *American Journal, Obs. and Gyn.*, May, 1917. In the analysis of the thirteen cases treated at the University of Minnesota Hospital during the period of seven months ending Oct. 1, 1917, I find that two were past 30 years of age (one 40, the other 35). Eleven were between ages of 21 and 29. Five were primipara, 8 multipara gravida ii to viii. Eleven registered a blood pressure of 170 systolic, or above, the highest being 243 with a diastolic of 145. Two had a systolic pressure below 130, but one of these had albumin + 3. The quantitative albumin ranged from a trace to 9 gm. per thousand, the highest registration occurred in the case resulting fatally. Only three suffered convulsions. Two were discharged from the hospital with a systolic pressure of 160, apparently otherwise in perfect health. Veratrine was employed for reducing the blood pressure with very gratifying results. One was delivered with low application of forceps four hours after admission, one mid-forceps after eighteen hours in labor; one breech, normal delivery, premature child; in four cases labor was induced by the colpeurynter; three cases labor was induced by bougies; four cases normal delivery, cephalic presentation. Eight full-term babies were delivered, one dead; five prematures, four dead.

There is nothing new in the application of the blood pressure findings to the study of obstetrics. It began with the work of Stephen Hales in 1733; but like many other valuable principals useful in the medical world, it has not had its full developed efficiency demonstrated and perfected until recent years. The first well-known paper on observations of blood pressure in eclampsia was published in 1897 from "Paris Maternite" by Vaquez, who voiced rather an extreme view after his observations. He states that if the blood pressure is very high, convulsions *will* follow, and that eclamptic seizures will never occur in case of normal tension. Vogeler supported Vaquez in his extreme ideas, and their views have been quite generally accepted, until the later and more careful observations appeared, such as reported by Lynch in 1913, who states it is possible in rare instances to have eclampsia with hypotension. The writer is of the opinion



that by the careful observation of blood tension antepartum, respecting its appearance as a danger signal, and correcting the physiology of the patient immediately, many cases of toxemia of pregnancy may be prevented. Furthermore, in event of continued hypertension, conservative painstaking methods of emptying the uterus are to be chosen over the accouchement forcé, or major abdominal operating, of necessity associated with the administration of an anesthetic and more or less shock.

The writer is also of the opinion that we will in the near future be provided with more simple methods of determining the co-efficient of each individual's metabolism, also with means of correction if irregular and of maintaining a constant, even chemical balance. The most valuable encouragement for the above possibilities can be found in the recent results of the work of Kendall at the Mayo Clinic in his remarkable research into the physiological chemistry of hyperthyroidism. There appears a striking similarity between the symptomatology of hyperthyroidism and the symptom complex of toxemia.

Kendall gives as one explanation of the constant relation between the tetany or convulsion, and the low urea and ammonia in the urine, that there is some substance which is an intermediate compound between ammonia and urea and this substance is highly toxic to the animal organism. By means of a very high rate of nitrogen metabolism, and an extreme diuresis, Kendall succeeded in separating one of the intermediary compounds in the formation of urea. Furthermore, there is the strongest evidence that this pre-urea compound is concerned in the production of the toxic symptoms by an injection of amino acids. Therefore, it seemed probable that the greatest factor in determining which type of reaction any animal would give was whether or not ammonia could be properly metabolized. Hence it would appear when we apply this procedure in the toxemias of pregnancy, if the conversion of ammonia into this intermediary substance proceeds too slowly, resulting in a high concentration of ammonia throughout the body, depression or coma results; if ammonia be converted into this substance too rapidly, faster than can be converted into the urea, irritability and convulsions result. Let us hope for the discovery or recovery of a balance in this chemical process.

#### CONCLUSIONS.

1. There is no doubt but that there has been a large increase in the number per 100 of reported cases of toxemia of pregnancy during the past two years. Let us hope this increase is due to more efficient reporting, rather than to actual increase in number afflicted.

2. Blood pressure observations provide the means for early detection of pre-convulsive toxemia and gives the first warning of an impending danger, together with a measure of its seriousness.

3. Persistence of arterial hypertension is the definite and absolute signal for termination of pregnancy as a means of preventing convulsions or coma.

4. Hypotension is a more common finding in the early months of gestation, but may also occur in the later months; is usually prophetic of shock or hemorrhage during approaching labor, but it is possible for it to accompany a serious toxemia, in rare instances.

5. Systolic hypertension of 150 c.c. of mercury should be considered a danger signal and close study, for presence of other evidences of toxemia, made.

6. When possible the conservative treatment and use of bougies or the colpeurynter as the means of inducing labor, is to be chosen, rather than accouchement forcé or hysterotomy.

7. While one attack of convulsive toxemia does not predispose another, we may have superimposed a chronic nephritis, which, unless carefully supervised following an apparent recovery, may result in a permanently damaged kidney. Hence a warning: "Do not discharge your patient from your observation too soon."

---

#### THE TREATMENT OF HEMORRHOIDS UNDER LOCAL ANESTHESIA.\*

CHARLES J. DRUECK, M. D.,

Professor of Rectal Diseases, Chicago Hospital College of Medicine; Rectal Surgeon to Fort Dearborn Hospital,

CHICAGO.

I have chosen this subject because hemorrhoids occur under very different conditions and in all classes of patients. Many methods have been de-

---

\*Read before the Chicago Medical Society, Oct. 31, 1917.

vised for relieving them and each method has its advantages in well selected cases. Your treatment is half done when you select your case, determine its proper treatment and know what results to expect. The reason you treat so few rectal cases is not that they are infrequent but rather that your patients do not wish to take a general anesthetic and be confined to bed. Patients suffering with piles are prone to use domestic remedies and nostrums until they are physical wrecks from loss of blood and pain, all the time refusing an operation. With our present knowledge it is not always necessary or wise to give a patient a general anesthetic. Practically all uncomplicated cases, and they are numerous, may be operated upon with a local anesthetic and thus eliminate the danger of a general anesthetic to life from heart, lung or kidney complications as well as lessening pain and the danger of secondary hemorrhage due to vomiting.

The word hemorrhoid comes from the Greek meaning to flow with blood, but this is not always a true definition, because frequently hemorrhoids exist without bleeding. Hemorrhoids are varieties of the anal or rectal blood vessels or blood clots beneath the mucous membrane or mucocutaneous tissues of these parts. There may be no hemorrhage, or if it occurs, it may be periodic in some cases and constant in others. The tumors may be wholly within the rectum or wholly outside or both inside and out. One patient may suffer pain, and difficulty in defecation and another suffers no inconvenience at all. The clinical picture is quite variable.

*Predisposing Causes.* Hemorrhoids are a result of some previous condition which acts differently in each patient. Circumstances and surroundings not only influence the induction of the piles, but are also factors in our choice of treatment, which sometimes may be operative or again must be tentative. Hemorrhoids may be found at any age of life. They are uncommon in children, but several good authorities have reported cases. Trunk (Tuttle) reported 39 children under fifteen years of age of whom 5 were under one year old. Young adult and middle life is the most frequent age because such factors as environment, habits and constitutional peculiarities are most active then. In advanced life the absorption of the peri-rectal fatty tissues, the relaxed muscular tone, constipation and sclerotic changes in the

liver and blood vessels contribute to produce hemorrhoids, but we also find hemorrhoids frequently in nervous, anemic individuals because of nerve and muscle exhaustion which causes circulatory relaxation and dilatation. For this reason melancholic, choleric, sallow individuals who suffer from liver diseases are prone to hemorrhoids.

Once the tumor has formed, subsequent inflammation will produce a hyperplasia of the connective tissue about the veins and there is no possibility of the tumor being absorbed, but it must be removed surgically. There are some cases of hemorrhoids to be operated upon under a general anesthetic when other surgical conditions need attention, but most cases may be satisfactorily operated on under local anesthetic, causing but from a few hours to two days detention from business, but the work should be done at the hospital to protect against chance of secondary hemorrhage. A local anesthetic has a distinct advantage in aged, timid or nervous patients.

The anus is one of the most difficult regions to satisfactorily anesthetize. Nerve blocking operations are difficult because of the many filaments from a number of sources. This region is exceedingly sensitive and the position of the patient, who is furthermore apprehensive and restless, adds to the technical difficulties of the operator. An intimate knowledge of the local anatomy, its nerves, muscles and blood vessels is important. The external sphincter is the most important muscle and its location and size must be studied. The sympathetic nerves descend within the rectal wall and are sensitive to traction even though the hemorrhoidal and coccygeal nerves be well anesthetized. The operator should also bear in mind the individual contraindications to the employment of local anesthetic, such as highly nervous or hysterical patients, or an idiosyncrasy of the patient to the drug employed and our preparations should include having on hand the antidote for the anesthetic drugs employed. The surroundings of the operating room, together with the nature and extent of the operation and the probable time it will require must all be carefully considered.

*Preparation of the Patient.* The patient should be as carefully and thoroughly prepared for a hemorrhoidal operation as for a laparotomy. The



bowels should be thoroughly emptied with a laxative the day before the operation, and from this time on the diet should be moderate in amount and absorbable. The night before the operation the peri-anal region is shaved and thoroughly cleansed and a sterile dressing applied. Three hours before operation the patient is given a one pint enema. One hour before the operation he should have a cup of soup or milk, as it is better not to operate on an empty stomach. He is now given a hypodermic injection containing morphin gr.  $\frac{1}{4}$ , hyoscin gr. 1/100, and atropin gr. 1/150. Visitors should now leave him. The operating room should be fully prepared before the patient is brought in so that no unnecessary disturbances arouse him. Strict silence should be observed by all in the operating room. The table should be covered with a thick pad and the patient should be provided with a pillow to help make him comfortable. Always remember that he is not anesthetized and every sound and touch is appreciated by him. He should, therefore, be handled as little and as carefully as possible, not tied or strapped in any way. The left lateral prone with the hips raised is the most comfortable position for the patient and the most satisfactory for the operator. I use one-half per cent. solution of novocaine for infiltration of the skin, thus permitting a liberal amount to be used without danger of toxicity, as novocaine is but one-seventh as toxic as cocaine. Quinine-urea solution is not used for the skin because its injection is painful. The success of a local anesthetic depends upon a careful and thorough infiltration of the whole field. I use a 26 gauge needle. A 30 c.c. syringe is filled with warmed anesthetic solution. The skin in the posterior raphe one-half inch back of the anal margin is touched with phenol on a swab and after waiting a few minutes the skin is picked up between the thumb and forefinger of the left hand and the needle introduced at the cauterized spot. A few drops of novocaine solution injected here causes a wheal to arise and after waiting a few moments the needle is advanced and another injection made, causing another wheal. In this manner the needle is carried forward just under the skin at a distance of one-half inch from the anal opening. When the needle has been advanced its full length on one side it is retracted to the posterior commissure but not withdrawn from the skin and

the infiltration carried up on the other side of the anus. When the full depth of the needle has been reached it is withdrawn and inserted at the most anterior wheal just made and the infiltration continued to the anterior commissure and around on the opposite side until the wheals meet those previously produced. In this way the whole anal opening is anesthetized while the needle is always kept one-half inch out from the edge of the mucous membrane. This procedure blocks the inferior sphincteric nerves. The mucous membrane of the anus is next anesthetized by placing a pledget of cotton wet with 10 per cent. solution of quinine-urea into the grasp of the sphincter. Wait ten minutes for anesthesia to be complete and then introduce the left index finger into the rectum above the external sphincter, hook the finger over this muscle and by slight traction, draw it down and steady it while the needle passed through the skin at the anesthetized bullea is plunged into the sphincter muscle, and 20 minims of the novocaine solution is deposited in the substance of the muscle. This deep injection is made in four places, one on either side of the commissures, front and back one-half inch out at the entrance of the lesser sphincter nerves. The index finger within the anus will assist in guiding the needle to the proper depth. A needle, long enough to reach the deeper layers of the sphincter is required, otherwise dilatation of that muscle will be incomplete. A syringe of fluid is now deposited immediately in front of the tip of the coccyx to block the coccygeal nerves and thus further facilitate dilatation. This infiltration procedure consumes 15 to 20 minutes and must be carried out carefully until anesthesia is complete. Then the finger within the rectum massages the sphincter and if the muscle has been well injected it will soon relax, but if not sufficiently anesthetized will contract upon (bite) the finger and we must wait longer. Never begin manipulations pinching or operating until the anesthesia is complete. This applies with equal force to local and general anesthesia. As the sphincter relaxes under the massage, a second finger of the same hand is introduced and if needed a finger of the other hand and the massaging and stretching continued until the capacity of the sphincter is reached. This maneuver must be carefully performed that the mucous membrane be not torn or the anal margin

not otherwise damaged. Just what is the full limit of the sphincter varies with individuals and the operator's experience is the criterion in each case. By this method there is never any danger of rupturing the muscle, as may occur under divulsion with the speculum. When the muscle has been thoroughly relaxed it will so remain long enough for us to operate. This slow, but thorough dilatation of the sphincter, is an essential factor in lessening the post operative pain by limiting sphincteric spasm. The hemorrhoids and the anal mucous membrane prolapse well under this treatment and the whole pile can be seen and reached. Although prolapsed internal hemorrhoids may be operated on without dilatation of the sphincter, I always make this procedure part of my technic because without it some part of the pile is very liable to remain internal to the sphincter and will cause a recurrence at a future time. Therefore, even if the hemorrhoid is within reach without dilatation the sphincter should be stretched, that all hidden nodules may be found. Also if the stump retracts above a tight sphincter a subsequent hemorrhage might not be detected for some time. Take plenty of time in making the dilatation because prolonged relaxation cannot be obtained if the stretching is roughly or hurriedly performed. Having opened the anus and brought the hemorrhoid well outside, it is now infiltrated with a solution of one-half per cent. of quinine and urea hydrochloride, using enough solution to distend the tumor thoroughly. The pedicle of the tumor should be injected and also the normal mucous membrane for one-half inch above the pile, as otherwise traction on the pile in handling will cause pain by stretching the sympathetic nerves which come down the rectum from above. By waiting five to ten minutes now before operating the best effect of the quinine is obtained and post operative anesthesia is much more satisfactory. The anesthetizing solution should be slowly forced into the pile so as to avoid a sudden painful distension of the tissues. After the needle has been inserted it may be turned in different directions and the tumor well infiltrated. If more than one puncture is made into the hemorrhoid the solution runs out as rapidly as it is injected. Sufficient fluid should be injected to blanch a part of the hemorrhoid. If several hemorrhoids are to be removed they are all in-

jected at this time before the removal of any is begun. Quinine solution is used for this part of the infiltration because it produces anesthesia, which lasts several days, during which time healing is well established. The anesthetizing solution should be used in as limited amount as will obtain the necessary results, because excessive quantities produce a large exudate which causes a sense of fullness in the rectum for several days.

*Operation.* Having satisfied ourselves that the whole field is thoroughly anesthetized the hemorrhoid is picked up at its upper end with a hemorrhoidal forceps and an incision beginning in the normal mucous membrane one quarter inch above the hemorrhoid is carried down on the left side of the pile and beginning again at this upper point a similar incision is carried down on the right side of the tumor. The upper pole of the hemorrhoid is now lifted out of its base, exposing the vessels as they enter the tumor from above. The vessels are now grasped with a thin artery forceps and the tumor cut free. The lateral incisions are now carried down to and around the lower border of the hemorrhoid. These lateral incisions are to be kept close to the hemorrhoid, or preferably in that part of the mucosa covering the side walls of the pile. The wound is now deepened all around the hemorrhoid to the connective tissue structures beneath the tumor and the pile is shelled out by blunt dissection. This enucleation of the tumor is almost a bloodless operation. The pedicle in the grasp of the forceps at the upper end of the wound next receives our attention. The size of this pedicle will vary with the size of the hemorrhoid, but even when the tumor is large and fleshy the pedicle is slender because it consists only of blood vessels and the connective tissue supporting structures between them. The pedicle is now lifted well up and examined to make sure that it is thoroughly freed from the mucous membrane and a number 0 catgut ligature is slowly but firmly tied close down at the base. One end of the ligature is now threaded on a curved noncutting needle and passed through the base of the stump beneath the ligature. The forceps and upper part of the stump are now cut free about one-eighth of an inch above the ligature and the thread that transfixes the stump is tied over the stump and across the encircling ligature, thus preventing it from slipping. As the stump is released it retracts



well into the bottom of the wound and the mucous membrane edges fall together over it. It is important to tie the stump carefully, as it is small and if not properly secured secondary hemorrhage may occur. The wound edges fall together in good apposition but should be secured by two or three small interrupted sutures. If the tumor is in the anal canal its lower edge may rest at the white line where the skin and mucous membrane meet. If the tumor is of the interno-external variety it must be treated as though it were two distinct hemorrhoids, one internal and the other external. There will be but little oozing for the first day or two but only such as can be cared for by a small external dressing. The lateral incisions are to be kept close to or better upon the edges of the pile to conserve the mucous membrane between the several tumors and not endanger the caliber of the rectum or the anal canal by possible subsequent contraction. The strips of attached mucous membrane left between each two operative wounds will also assist in rapid and satisfactory healing. If this work is poorly performed stricture of the anus may result. Care must be exercised that none of the incisions extend beyond the anesthetized area. The hemorrhage during the operation is slight. The large vessels are not injured because they enter the hemorrhoid at its upper part and run parallel with the length of the bowel just under the mucous membrane. If a large vessel is accidentally severed it is an inferior hemorrhoidal vessel at the lower border and may be picked up and ligated separately or included later in the sutures approximating the wound edges. The operation need not be hurried and the utmost care and gentleness should be exercised in the use of tissue forceps, retractors, and in sponging. Skin tabs at the muco-cutaneous junction at the anus must be cut off flush with the skin surface. It is important that these skin tabs be removed at the time of the operation. Otherwise they engorge and inflame and become most painful.

When the patient is put to bed keep him in the Sims' position or else prone (on his face). Do not allow him to lie on his back, because in this position the middle and superior hemorrhoidal vessels in their upper portion are in a vertical position. At the pelvic brim they bend a sharp angle and the abdominal contents are superimposed. All of these obstruct and as the hemor-

rhoidal vessels have no valves there is a back pressure and a tendency to swelling, a giving away of the stitches, and more pain as well as a delay in repair.

No opiate is needed. If the patient has been properly prepared the bowels will not move until a purgative is given, after which the bowels are emptied each day by administering an enema of 1 ounce of olive oil in a pint of warm water given through a soft rubber catheter. These patients expect defecation to cause terrible pain, and I presume their fear acts as an inhibition to evacuation. The accumulation of flatus in the bowel is frequently an annoyance. If it occurs, urge the patient to void it. If left to himself he usually restrains the desire because he is afraid bleeding may occur and he will often spend a wakeful, restless night when he could have relieved himself without any possible harm. The patient is advised to use the commode instead of the bed pan, thus contributing to an easier evacuation without straining. When the inclination for a bowel movement is felt an injection of one ounce of warm mineral oil into the rectum will facilitate defecation without trauma.

I never use bichloride of mercury during the operation nor in any of the after-dressings because it sets up a teasing tenesmus as soon as the sensory nerves recover. Neither do I use a rectal tube, it cannot do any good, and it always makes the patient uncomfortable.

The advantages of this technic are:

1. The operation is thorough and is satisfactorily performed under local anesthetic.

2. The sphincter muscles are not disturbed or injured by forcible dilatation as a speculum is not used.

3. The ligature is so applied as to securely hold the vessels and secondary hemorrhage cannot occur.

4. The stump is small and buried, and the wound edges are closely approximated so that the resulting scar is smooth and level with the surrounding mucosa instead of being raised. Therefore, it does not obstruct the passage of the feces. It is this raised hard scar, left after operation for the removal of hemorrhoids, which more than any other one factor tends to induce a recurrence of the trouble.

5. All of the diseased tissue is removed, therefore recurrence is impossible, but enough

of the mucosa is left to maintain in good order the tactile sensibility of the anus.

6. The scar of the wound conforms to the axis of the anal canal and cannot narrow the lumen of the bowel.

7. The post operative analgesia of the quinine solution continues for several days and the patient is up and out in a day or two.

30 North Michigan Avenue.

### LIQUID PETROLATUM AS AN ANTISEPTIC\*

H. D. JUNKIN, M. D.,  
MILFORD, ILL.

For the past two years the writer has been using liquid petrolatum as a means to combat infections. The results have been so striking that a report of our findings seems permissible.

It is a well known fact that oily substances coming in contact with bacteria tend to encapsulate them and prevent their multiplication. On this theory the use of the so-called liquid vaseline was applied to various forms of infection.

A very striking example of the effect of this treatment occurred in a severe infection of the abdominal wall of a very fleshy female patient. The case had been operated on for tubal infection with a resulting fecal fistula. The abdominal wound soon opened the entire length, also the surrounding skin became cratered with sloughing and gangrenous spots. The usual measures had been resorted to with little effect. On the sixth day of the infection sterile liquid petrolatum was injected into the fecal tract; into the many recesses made by the pus; and finally the wound filled with the liquid. Also the sterile compresses were soaked in the oil before applying to the wound and the dressing changed three times in twenty-four hours. The tissue infection was destroyed in seven days and many fresh, healthy granulations in evidence. The fecal fistula closed two weeks after the first oil treatment.

In abscesses of the abdominal cavity, especially resulting from the appendix, our results with the oil have been pleasing. Here the cavity is washed with the oil at the time of operation by use of a syringe and the cavity filled with the oil. A rubber tube leads to the bottom of the cavity through which the oil is passed at each dressing.

In wounds of the extremities the sterile dressings are soaked in the oil and then applied to the parts. Any pus cavities forming in such wounds are washed out by means of a syringe filled with the liquid petrolatum.

### SUMMARY

Oily substances tend to encapsulate the bacteria, thus destroying the infection.

Great comfort is afforded by the oil dressings because of the non-irritating quality of the oil and its prevention of the dressings adhering to the wound.

Owing to the low specific gravity of the liquid petrolatum it is especially effective in reaching the many recesses of an infected area.

Some twenty-five infected cases have been treated with the oil. No other antiseptics were employed. The results were all very striking.

### THE COURSE OF THE TUBERCULOUS DISEASE AT DIFFERENT AGES.\*

JOHN RITTER, M. D.,

Assistant Professor in Medicine, Rush Medical College;  
Physician in charge Tuberculosis Clinic.

CHICAGO, ILL.

Tuberculosis presents an ever-changing picture, beginning with the primary infection in early infant life, gradually invading various organs and tissues of the body, and terminating with the fully developed pulmonary tuberculous disease in adult life.

As early as 1889, the immortal Robert Koch, in his studies which led to the discovery of tuberculin, was able to demonstrate in susceptible animals certain facts which since that time have been considered as definite and indisputable laws.

He observed, for instance, that if a guinea pig be inoculated with live, virulent tubercle bacilli of the human type, nothing will be noticeable for ten to fourteen days; that after that time a nodule begins to form at the point of inoculation, which soon begins to soften, break down and discharge pus; that this ulcer shows a nonhealing tendency and at the same time the regional lymph glands become enlarged but do not break down. If, now, a second inoculation be made, after a period of about six weeks, this

\*Read before the Iroquois-Ford County Medical Society, September 4, 1917.

\*Read at the meeting of the Livingston County Medical Society at Pontiac, Illinois, November 1st, 1917.



behaves quite differently from the first, in so far that it is not followed by a period of incubation, the regional glands do not become enlarged, but that the seat of inoculation is followed by an ulcer, which simply sloughs, discharges pus and rapidly heals, and that repeated reinoculations favorably influence the primary ulcer in healing. He observed further that the primary inoculation, as well as all subsequently injected bacilli, usually remained at the point of entry and do not enter the circulation as such, and that only the glands nearest to this primary lesion are secondarily involved.

Similar observations are constantly made when animals are inoculated artificially with live tubercle bacilli, and a close study of the natural infection in both man and animals has proven that entrance of human tubercle bacilli into any part of the body, either through the cuticle, the upper air passages, confined to the tonsils, or by means of the bronchial tubes, follows similar definite laws; that is remaining usually at the point of entry for some time, during the period of incubation, and that subsequently through the lymph flow the nearest lymph glands are secondarily involved, and that repeated reinfections have a beneficial and healing influence on the primary or first infection.

Nearly all human tuberculous infection is spread from man to man, usually from a tuberculous adult to an infant, and in most infants and small children suffering from tuberculous disease it is possible to prove the presence of, or close contact with, an adult suffering from active pulmonary tuberculosis. This infant or early child infection is usually aerogenous, that is, by way of inhalation, and it is not necessary that this early contact infection be prolonged over long periods of time or oft repeated, as a single exposure of an infant to the surroundings of an active tuberculous individual for only a few minutes has been found sufficient to cause active tuberculous disease in later life.

Most primary lesions in this early or infant infection are clearly demonstrable in the lung tissue, and are either parenchymatous or sub-plural, and from these primary foci the regional lymph glands become secondarily involved. That this does take place was demonstrated first by Parrot in 1876; later by Küss, 1898; then by Nageli, 1900; and Albrecht 1907, 1909; and

the recent and thorough work of Ghon, 1912, reconfirms on 184 autopsy findings this earlier work, and again the thorough and able labor of Dr. Miller of Madison, Wis., has corroborated this.

Primary foci usually originate in or near the lung structure that is the lesser circulation, but there is always in this early infection a strong tendency to spare this circulation and be more or less confined to the greater, only to return to a predilected involvement of the lesser circulation in young adult life and thence up to old age. Though the primary infection may take place in the pulmonary parenchyma, the subsequent lymph drainage, conveying bacillary bodies and their products, is usually away from the pulmonary tissue towards the regional lymph glands in and about the mediastinum, and only in exceptional instances do we find the pulmonary lymph glands secondarily involved, leading to rapid active pulmonary disease and speedy death of the infant.

What course the disease pursues after the primary infection has taken place depends mainly upon the amount of infecting organisms, their virulence and their finding ready lodgment in the human body; this makes tuberculosis primarily a quantity infection, how many bacilli are deposited within a given time; likewise upon the frequency of reinfection, if single or multiple; also, upon the virulence of the invading organisms and the sensitiveness of the young host. If the first or primary infection is massive—that is, if many bacilli, large in amount, virulent, and oft repeated in the child's early months or within the first year, enter the body, then no organ or tissue is spared from the invaders and the child succumbs from generalized tuberculosis and rarely sees the middle of the second year.

The number of those recovering from this early infantile tuberculosis is usually very small, the estimated mortality being anywhere from 95 to 100 per cent. All the remaining infants mildly infected in the first year of life, as well as all children after the first year, that is, during the second and third, either massively or mildly, form the great army which in the following years are the victims of some form of tuberculosis, and in all these so infected we will find, as a rule, that in this early infection the pul-

monary circulation is comparatively free from active disease, and that the tissues and organs supplied by the greater circulation stand the brunt of the invading bacilli. We find the glands about the hilus, and near the bronchial bifurcation, the epibronchial, peribronchial, tracheo-bronchial, broncho-pulmonary, even the tracheal enlarged, if they should, be incapable of holding the virus in check, then the mediastinal glands, as a whole, take part in this process, and, being more capable to check the inroads of the virus, the process now assumes a more or less quiescent course. About 50 per cent., of all infected infants at this period succumb to active tuberculous disease in one form or another, and now, as the age of the child advances, we find up to the 5th or 6th year of life only about 20 per cent. who are victims of tuberculosis, and that all children infected after the 5th year of life are seldom tuberculously diseased, and if so, that the tuberculosis at that age is simply the result of a previous or earlier infection. Further, we will often notice, at this period, a strong tendency to a less frequent involvement of the glands, but a distinct metastatic tuberculosis of other tissues and organs of the greater circulation.

We now observe the frequency of bone and joint tuberculosis, and particularly in the earlier years and up to the 6th and 7th, affecting chiefly the small bones or joints and tuberculosis of the wrist and ankle bones, the carpal and tarsal, the metacarpal, metatarsal and phalangeal, with an occasional spinal ventosa, and as the child advances towards puberty, the larger joints, the knee, ankle, shoulder and hip, all of which until now have been spared from the early involvement, are most frequently the seat of tuberculous disease.

At this period the mortality from all forms of tuberculosis seems to have lessened, the disease having now assumed a more benign form, and at the age of puberty and a little beyond, and up to about the age of 14, we find that only 2 per cent. perish from tuberculous disease. It is most interesting at this period to note that as the frequency of the infection rises the mortality decreases, and that the ratio between the tuberculosis mortality and those who are tuberculously infected is in inverse proportion. In early infancy the infection is usually estimated to be between 1 and 2 per cent. with a mortality of nearly 100, whilst at the age of 14, with a

mortality of only 2 per cent., we find that the number of those who are tuberculously infected reaches more than 95 per cent., with closely corresponding figures for the years between these points.

In the middle of the second decade of life we again notice a decided change in this ever-changing tuberculosis picture. We had noticed in the beginning of the first decade that tuberculosis assumed a very acute, virulent form, more subacute toward the middle of the decade and toward the close of the first and beginning of the second a chronic or even benign form, and up to this time more or less sparing the lungs. It seems that the organs and tissues supplied by the greater circulation, and which up to this time have stood the brunt of the disease, have now acquired a certain degree of immunity, for we will notice that from now on the organ of the lesser circulation is most vulnerable, and we will notice particularly that this pulmonary attack in the middle of the second decade is again, as at the beginning, most virulent, very acute and most fatal, assuming a more subacute form toward the close of the second decade and during the greater portion of the third, after which the disease again assumes a more benign or chronic form and, as compared with the pulmonary circulation now involved, during this time, all other forms of tuberculosis seem very infrequent.

While the disease in early life attacks the glands, the joints, the bones, the meninges, the skin, which in later life are infrequently attacked, the lungs, which until now have been more or less spared, are in the second decade attacked, at first, with great vigor and a little less severely as life advances, and one is now more or less impressed by the facts that no other disease is so variable in attacking different organs in the different ages and that tuberculosis of the glands is as infrequent in adult life as is pulmonary tuberculosis in child life.

If the tuberculosis mortality in early infant life is 98 per cent. or more, 50 per cent. at the age of 3, 20 per cent. at the 5th to 7th year of life and only 2 per cent. at the age of 14, then logically at the age of 15 or 16, when all are infected, it ought to be zero, and it would be so, and no more deaths from tuberculosis would follow if it were not that at this period many insidious intercurrent conditions arise, which



account for the acute, subacute and chronic form of pulmonary tuberculosis which we now so frequently see after the 14th year of life. It must, however, be admitted that active pulmonary disease is occasionally encountered even before the 10th year of life, but not, as a rule. Now it may be truthfully stated here that every adult suffering from active pulmonary tuberculosis has violated some hygienic law, and is simply paying the penalty for this violation. Let us study this somewhat closely.

Intercurrent conditions, or, more properly speaking, indirect, contributory, predisposing or causative factors of pulmonary tuberculous disease, are not always noticeable in young adult life, although they very frequently exist. We all have undoubtedly observed that towards puberty, the usual conditions which prevailed in child life have changed, that a new stimulus had taken possession of the young adult, and from the school days, with romping and playing, with no responsibility, remaining out of doors the greater part of the day, we now find the young adult suddenly thrown upon his own resources, and the individual struggle for existence now takes the place of many of his former sports, and he begins to realize more from day to day his ever-increasing responsibility. If to this be added his personal appearance, which now plays a most prominent rôle, for indifference has given way to more social pleasures with its exacting tribute, and perhaps a very limited earning capacity, then all the slowly beginning factors necessary to render a quiescent tuberculous focus active are present.

And, let us add to this picture many hours of indoor confinement, breathing unwholesome, vitiated air in stuffy offices, rooms, factories or work-shops, perhaps insanitary or bad housing, then the conditions are most favorable for bringing about a pulmonary tuberculous activity, the rapidity or slowness of the disease being dependent upon the primary infection or on how much or how great an immunity or resistance the organism has in early life developed. This applies to the youth of both sexes. The lowering of body resistance by insufficient intake of good, nourishing, wholesome food in sufficient quantity, now also plays a leading part. A young lad living under such conditions, whose noon lunch consists of a piece of pie and a cup of coffee,

followed by smoking a number of cigarettes, is simply courting tuberculosis, and the same applies to many of our good, but imprudent and careless young girls, who wear \$10 shoes and put a 10-cent dinner into their stomachs, and perhaps in addition, persisting in wearing, in the winter months, the raiment intended for summer wear. It must not be forgotten that each and every other factor which aids in the lowering of body resistance will be a powerful contributory agency for the development of an active tuberculous process from a larval, and in the greater number of cases of active tuberculous disease we can trace back the onset of the malady. If to the bad housing, poor ventilation of offices, work-shops, homes, stores or living quarters be added excesses of all kinds, like the immoderate use of alcoholic beverages, excesses in eating or much carousing, insufficient rest and sleep, exciting sports, prolonged nervous excitability, nervous shock incident to accidents of all kinds; or, perhaps, the effect of various acute diseases which lower vitality, like measles, scarlet fever, pneumonia, typhoid fever, malaria, etc., as well as prolonged operations with or without much loss of blood, then everything is most propitious for the creating of an active tuberculous process, chiefly pulmonary, from a quiescent, latent or inactive one.

All this we notice most frequently in the second decade of life, but with the beginning of the third these causative factors appear more or less in the background, and other equally important ones seem to be in the lead, and whilst in the second decade the disease was more acute, it now assumes a more subacute form, which nevertheless leads equally to a fatal termination. In this, the third decade, we most frequently find, in families particularly, a strong tendency to get along in life, and the buying of a home, the saving of money to educate the children, the greater demands of society, the putting of the best foot forward now predominate, and the effects of overwork, overstudy, long hours with insufficient rest, saving on food intake or on the necessities of life now demand their victims. At this period we will notice occasionally the baneful effect of having led a vicious life, all of which is still more noticeable in the fourth decade, when the chronic alcoholic, the spendthrift, the vicious and the low are now paying the penalty in the

long drawn out chronic form of pulmonary tuberculosis, lasting, in many instances, many, many years, and during all this time being the most prolific source for the spreading and propagation of tuberculosis. Indeed, it may be stated without reserve that the so-called reformed alcoholic, suffering from a chronic cough, usually referred to as asthmatic or bronchitic is, above all, one of the greatest infectors of mankind, because, having free access to the homes of his friends and relatives, usually fondling the infants and small children of the household, makes him most particularly dangerous to the community.

#### SUMMARIZING.

We have noticed from what has been said that tuberculosis in very early life runs a very acute, a very malignant course, assuming a more subacute form in the middle of child life and towards puberty becoming more chronic and more benign; and that the involvement of the organs and tissues of the greater circulation, which up to this period were most vulnerable, seems to be less so now. The organs of the lesser circulation, the lungs, in the second decade, are chiefly affected, and in this involvement it assumes now, as in the beginning of the first, a very acute malignant form, but now pulmonary; toward and during the third decade the subacute; in the fourth and after that the chronic, or again a more benign form, then again we find that late in life it may occasionally assume the acute form, hence we must acknowledge that tuberculosis is a chronic infection, accompanying the infected individual from infancy or early child life until death or old age, and at any time during all these years may assume either an acute, subacute or chronic manifestation of the disease, excluding during all the years no tissue or organ of the human body, having in the earlier years a special predilection for the organs of the greater circulation, in young adult life a decided preference for the organ of the lesser circulation, the lungs, and whereas in the earlier infection there is a strong tendency to a metastatic manifestation of the disease through the lymph and blood stream, lymphogenous and hematogenous, manifested in tuberculosis of the glands, meninges, bones, joints, etc., this in tuberculosis of the lungs giving way to immediate reinfection and spreading of the disease by direct contact with the secretions flowing from the bronchial tubes, we now

find tuberculosis of the larynx, tuberculosis of the abdominal organs from tubercle bacilli, which find their way from the ingested, bacilli-laden sputum, passing down from the stomach into the intestinal tract and into the other abdominal organs and glands. It should be mentioned here that abdominal tuberculosis, so frequently seen in children and manifested by tuberculous peritonitis, intestinal gland tuberculosis is not of this form, is not the result of human bacillary infection, but usually the effect of the ingestion of milk from tuberculous cows, containing the bovine bacilli.

With our present knowledge concerning this disorder, we may deduct the following *tuberculosis truisms*.

1. If v. Behring's axiom; "Manifest pulmonary tuberculosis in the adult is only the end of the song which was first chirped at the cradle"—can be accepted as true, then it may be worded more clearly that the active pulmonary tuberculous adult simply completes the chain or cycle of the disease which began in infancy, and who now too often carelessly spreads in many directions the seeds of numerous beginning chains or cycles, and which are now fostered in each newly infected individual, again to begin chiefly after puberty, to complete the new cycle, and making in this way from the starting point innumerable endless chains.

2. If the adult suffering from active pulmonary tuberculosis is simply paying the penalty for having violated some fixed and definite hygienic law, then it is within the province of every primarily infected individual (and that includes nearly every human being) to, avoid this violation, and after the age of puberty to guard against manifest tuberculous disease, to keep his infection quiescent and to enjoy at all times the privileges of perfect health.

3. If in early life we must guard infants and small children from tuberculous infection by not exposing them to the presence of the active tuberculous adult, or, in other words, institute prophylactic measures against a tuberculous exposure, then in young adult and middle life it will become necessary to limit the tendency, the contributing factors; in other words, the disposition to the disease, and suitable prophylactic measures against a tuberculous disposition must be maintained.

25 E. Washington St.



# ILLINOIS MEDICAL JOURNAL

Published monthly by The Illinois State Medical Society, under the direction of the Publication Committee of the Council.

## GENERAL OFFICERS, 1917-18

PRESIDENT.....E. B. COOLLEY, Danville  
 PRESIDENT-ELECT.....E. W. FIEGENBAUM, Edwardsville  
 FIRST VICE-PRESIDENT.....E. P. SLOAN, Bloomington  
 SECOND VICE-PRESIDENT.....SADIE BAY ADAIR, Chicago  
 TREASURER.....A. J. MARKLEY, Belvidere  
 SECRETARY.....W. H. GILMORE, Mt. Vernon  
 (Ex-officio Clerk of the Council)

## THE COUNCIL

District 1—EMIL WINDMUELLER, Woodstock.  
 District 2—EDWIN S. GILLESPIE, Wenona.  
 District 3—CLYDE D. PENCE, Chicago.  
 District 4—C. S. NELSON, Springfield.  
 District 5—C. D. CENTER, Quincy.  
 District 6—C. F. BURKHARDT, Effingham.  
 District 7—C. E. PRICE, Robinson.  
 District 8—FRANK C. SIALEY, Carmi.  
 CLYDE D. PENCE, Chairman, 8338 Ogden Avenue.

Send original articles and all communications relating to advertisements and mailing list to Dr. Clyde D. Pence, Editor, 8338 Ogden Avenue.

Membership correspondence to Dr. W. H. Gilmore, Mt. Vernon, Ill.

Society proceedings and news items to Dr. Henry G. Ohls, Managing Editor, 927 Lawrence Avenue, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

## MEDICO-LEGAL COMMITTEE

ANDY HALL.....Mt. Vernon  
 WILLIAM O. KROHN.....Chicago  
 GEORGE STACY.....Jacksonville  
 D. R. MACMARTIN.....Chicago  
 C. B. KING, Chairman.....8938 Jackson Blvd., Chicago  
 THOMAS D. CANTRELL, Secretary.....Bloomington

## GENERAL COUNSEL

ROBERT J. FOLONIE.....39 S. La Salle Street, Chicago

State society will pay no bills for legal services except those contracted by the committee. Notify the Chairman at once. Don't employ attorneys

DECEMBER, 1917

## Editorials

THE JOURNAL WISHES ALL ITS  
 READERS A MERRY CHRISTMAS  
 AND A HAPPY NEW YEAR



JOIN THE AMERICAN RED CROSS  
 TODAY

## AMERICAN RED CROSS

The first semi-annual report of the Red Cross, together with a report by the War Council of appropriations and activities from the outbreak of the war, is out. It is scarcely necessary to describe the aims of this organization, but briefly they are:

1. To be ready to care for our soldiers and sailors on duty wherever and whenever that care may be needed.

2. To shorten the war—by strengthening the morale of the allied peoples and their armies, by alleviating their sufferings in the period which must elapse until the American army can become fully effective abroad.

3. To lay foundations for an enduring peace—by extending a message of practical relief and sympathy to the civilian population among our allies, carrying to them the expression of the finest side of the American character.

The report is, of course, too lengthy to reproduce here in full, but we wish everyone could read it. The appropriations and donations have been large—in one sense, generous—but they have not been half large enough. We firmly believe in doing anything which may lessen the sufferings of wounded soldiers or starving, destitute women and children.

Possibly the Red Cross cannot make a dollar do as much in Europe, as an individual could make it do here—there must be expenses of administration—but we have the positive assurance that it is being used to the best possible advantage.

## THE RED CROSS SALARY LIST

At National Headquarters in Washington a staff has been built up which included, on November 1, 1917, sixty-three officials, most of them business men and women of great experience in large affairs, who are working without payment of either salary or living expenses.

Numerous others are either giving their time or are working for nominal pay. The membership has grown, since the war, from about 200,000 to more than 5,000,000. The salary list has been reduced since last July from about 700 to about 425. Salaries have decreased also in average amount. Had the Red Cross been obliged to pay salaries to all the heads of departments at National Headquarters the present organization would have been impossible.

The Association has done much, is devoting all resources possible to our armies and to relieve suffering and starvation wherever found, but it must do still more. It must increase both its strength and its resources. Our soldiers must be given all the care we can give them; and cer-

tainly we cannot see maimed children starving without doing our utmost to help them.

It has been the custom of people of all countries to observe the celebration of Christmas by giving presents—most frequently to those not needing them specially—and in giving useless remembrances. In the United States the total of Christmas celebration amounts to millions of dollars. This is all well—we believe it should be so, usually—but for this year, and while such suffering exists, would it not be much better to devote much of this money usually spent at Christmas time to the causes of humanity? Will it work a hardship for your family to have a very simple and inexpensive Christmas celebration, and will not your family feel better and more like they had fittingly celebrated the nativity, if they donate this Christmas money to the relief of suffering in Europe? We would appeal to all our readers to render all support to the Red Cross.

#### MEDICAL PIONEERS OF KENTUCKY.

The November issue of the Kentucky Medical Journal is a history of early medicine of Kentucky. The entire number, 172 pages, is given to historical data of those Kentuckians who not only were the medical men of Kentucky, but many of whom helped make medical history for the world. Very appropriately the volume begins with a biographical sketch of Dr. Ephraim McDowell.

We congratulate the editor upon the production of this number. It has required an immense amount of painstaking labor to secure biographers who would and could get this history in form. Every Society member should procure a copy of this journal. He will be able to while away many evening hours in the reading of it and contemplation of the wonderful work done by some of these men—work done under circumstances which would now be considered impossible. It is to be regretted that each state in the Union cannot have some one write up its medical history.

#### RESOLUTION ADOPTED UNANIMOUSLY BY THE CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA AT CHICAGO, OCTOBER 25, 1917.

WHEREAS, The experiences of the nation convince us of the necessity for Universal Military

Training, to furnish qualified men for defense, to strengthen manhood and mental poise, and to make for a more efficient citizenship, and

WHEREAS, We believe it will democratize youth and furnish discipline, while developing physical force and endurance, and will produce better fathers and workers for the ranks of peace; therefore be it

*Resolved*, That the Clinical Congress of Surgeons at its eighth annual session urges upon Congress as its coming session the passage of a measure along the general lines of the Chamberlain Bill for Universal Military Training, and that the cantonments now used by the National Army be utilized, if possible, for such work.

#### ACTION OF THE STATE COMMITTEES OF THE MEDICAL SECTION, COUNCIL OF NATIONAL DEFENSE

URGING IMMEDIATE ACTION PROVIDING FOR AT LEAST SIX MONTHS OF INTENSIVE MILITARY TRAINING OF ALL YOUNG MEN IN THEIR NINETEENTH YEAR, TO BECOME OPERATIVE AS SOON AS THE ARMY CANTONMENTS ARE AVAILABLE; ALSO RECOMMENDING PHYSICAL TRAINING IN SCHOOLS, ETC.

The following resolutions were adopted unanimously at a meeting of Committees from all states (except Maine and Delaware) held in the Congress Hotel, Chicago, October 23, 1917:

WHEREAS, The experience through which the United States is now passing should convince every thoughtful person of the necessity for the universal training of young men, not only for the national defense in case of need, but also to develop the nation's greatest asset—its young manhood—in physical strength, in mental alertness, and in respect for the obligations of citizenship essential in a democracy; therefore be it

*Resolved*, By the State Committee of the Medical Sections of the Council of National Defense that they strongly urge the adoption by our government at this time of a comprehensive plan of intensive military training of young men for a period of at least six months, upon arriving at the age of nineteen years; and that this body also support the movement to secure the introduction into public schools of adequate physical training and instruction;

*Resolved*, That the members of each State Committee immediately take active steps to in-



sure public support for the subject of these resolutions through the newspapers, through public meetings and through the appointment of committees in each county; also that copies of these resolutions be forwarded to the Senators and Members of Congress in their respective states, with a personal request that favorable action be taken at the coming session of Congress upon a measure following the principle of the Chamberlain bill and to become operative as soon as the army cantonments are no longer required for the training of the forces in the present war;

*Resolved*, That each State Committee from time to time report to the Medical Section of the Council of National Defense as to action taken and progress secured in their several states.

### THREE FIRMS LICENSED TO MAKE DRUG PATENTED IN GERMANY

The Federal Trade Commission has authorized the following:

The Federal Trade Commission today entered orders for licenses to three firms to manufacture and sell the product heretofore known under the trade names of "Salvarsan," "606," "Arsenobenzol," "Arsaminol," patent rights which have been held by German subjects. The orders for licenses are subject to acceptance and agreement by the licensees to the stipulations made by the commission. Upon such acceptance and agreement licenses Nos. 1, 2, and 3 will be formally granted by Secretary L. L. Bracken, acting for the commission.

Hereafter this important drug will be manufactured and sold under the name of "Arsphenamine."

#### AUTHORITY FOR ACTION.

The Trade Commission's action was taken under section 10 of the trading with the enemy act, under direction of Commissioner Fort, upon recommendation of C. H. McDonald, Edward S. Rogers, and Francis Phelps, in charge of granting such licenses. The Public Health Service has prepared rules and standards for the manufacture and testing of "Arsphenamine," and will supervise its manufacture, authority having been conferred on the Public Health Service by the Secretary of the Treasury, and the observance of the rules and standards become a condition of the license.

The three firms which will be hereby permitted to manufacture and sell "Arsphenamine" are Dermatological Research Laboratories, of Philadelphia; Takamine Laboratory (Inc.), of New York; and Farbwerke Hoechst Co. (Herman A.

Metz Laboratory), of New York. The original patent for manufacture of what has heretofore been known as "Salvarsan," etc., was issued to Paul Ehrlich and Alfred Bertheim, German subjects, and assigned to Farbwerke Vormal's Meister, Lucius and Bruning, of Hoechst on the Main, Germany.

The supply of the drug now licensed to be made in America, up to 1915, was almost exclusively obtained by importation from Germany. It is at present the only known specific for virulent blood poison. From the outbreak of the war importation became more difficult.

#### PRICE OF DRUG.

Before the war began the patented drug was sold at \$4 per dose, which is approximately \$3,500 per pound, and speculatively it has brought as high as \$35 per dose. While the price of the product is not fixed at this time by the commission, the right to fix prices is retained, and a price of \$1 per dose to the Army and Navy, \$1.25 per dose for hospitals, and \$1.50 per dose for physicians are the prices at which some, at least, of the licensees have stated that they intend to offer the licensed drug.

The enormous shortage of supply of this important product will immediately be relieved, and the article placed in the hands of the Government, the hospitals, and the medical profession at a price lower than ever before.

Official Bulletin, November 30, 1917.

### ANNOUNCEMENT TO PHYSICIANS, PUBLIC HEALTH AND SOCIAL WORKERS OF THE UNITED STATES AND CANADA

The Metropolitan Life Insurance Company invites physicians, public health and social workers to make use of its valuable collection of mortality statistics.

These statistics present the principal causes of death among white and colored wage-earners in the United States and Canada. The material covers over ten million individuals for each of the six years, 1911 to 1916. Death rates are available for each race, by sex and by age period.

The Company hopes in this way to aid in the study of disease and disability among wage-earners. It desires to stimulate medical investigation and research. By offering these statistics to the medical profession and to public health and social workers, the Company expresses also its appreciation of the co-operation which it has received from physicians and others who have replied to inquiries and have given detailed information in thousands of cases. This assistance has helped to make the statistics more accurate and valuable.

All inquiries should be addressed to Statistical Bureau, Metropolitan Life Insurance Company, One Madison Avenue, New York City.

#### WAR PRICES DEPRIVING BABIES OF MILK.

Washington, Dec. 4.—Decreases reported from New York and Chicago and New England cities in the amount of milk being now consumed by families with young children have led the Federal Children's Bureau to emphasize its imperative necessity in the diet of babies and young children.

Dr. Grace L. Meigs, the director of the Bureau's Child Hygiene Division, in commenting on the danger of such a decrease to the health of children today, said, "Milk is the one food that all young children must have if they are to be strong and healthy. Whole milk is rich in the elements without which the child's growth ceases and his health is impaired; indeed there is no food which can supply as well the needs of the growing child.

"There is no substitute for milk in the diet of babies and young children. Yet the increase in its price is so startling that, as the reports the Bureau receives show, many mothers are economizing on milk. Young children can not get the nourishment they require from the would-be milk substitutes given them. Patent foods which do not themselves contain milk and are not intended to be mixed with milk are so lacking in the essentials of healthy development that we must expect children fed on them instead of on milk to be weakly and ailing. Plainly very great harm is done young children by giving them tea and coffee to take the place of milk which is really a complete food; it is giving them mere stimulants to replace their best food."

Since the price of milk went up to 14 cents a quart, tea and coffee have been substituted for milk by more than half of the 2,200 families—all with children under six—included in the study of the effect of the increased price of milk just made in New York City by the mayor's Committee on Milk, the City Department of Health and the Association for improving the Condition of the Poor. One hundred and twenty families have stopped taking milk entirely, in 25 of these there are babies under one year old. All the 2,200 families have young children, but nearly half are taking from one-fourth to one-half less milk than before the price went up. Yet even before the larger price decreased the amount of milk they bought these families were getting but little more than half the amount of milk which experts on children's diets say they need.

In Chicago as well as New York the rise in the price of milk has forced down the amount purchased. A dealer there reports that while he distributed on an average 4,000 quarts of milk a day in September, on October 3 with the price increased, he distributed only 2,500 quarts.

In New Haven, Bridgeport and other Connecticut towns milk delivered at the station is sold wholesale at 8 cents a quart. It retails as high as 15 cents a quart. In Waterbury, when the price was raised from 12 to 15 cents a quart the sale was so greatly reduced that the price has been dropped back to 14 cents.

#### THE AMERICAN REVIEW OF TUBERCULOSIS.

Within nine months the *American Review of Tuberculosis* has made for itself a unique place in medical circles throughout the United States and in almost all parts of the world. Few specialized journals have received a more cordial welcome than this one has, as evidenced by its rapidly increasing subscription list. The large number of medical men who are interested in the treatment and prevention of tuberculosis gives the *Review* an unusually extensive field.

The *American Review of Tuberculosis*, however, has an appeal also to those who are not directly interested in this disease, that is to the internists, to the laboratory men, and even to the surgeons who are specializing in related fields. Tuberculosis has many ramifications and is so intimately bound up with the practice of all physicians that this journal should find a ready place in the library of every man who wishes to keep himself posted for his own best interests and those of his patients.

The *Review* aims to be not only a clearing house for the best American thought and production in relation to the clinical, pathological and sociological phases of tuberculosis, but it aims at the same time to stimulate renewed interest on the part of those who are already working in this field and to arouse interest on the part of the general practitioners to whom tuberculosis does not make a very ready appeal. It is not a propaganda journal but it does frankly aim to be educational, as every good medical journal should do.

Its editorial staff, headed by so well-known an authority as Dr. Edward R. Baldwin of Saranac Lake, for so long an associate of Dr. Trudeau, and containing the names of men of such national and international prominence as Dr. Lawrason Brown, Saranac Lake, N. Y.; Dr. H. R. M. Landis, Philadelphia, Pa.; Dr. Paul Lewis, Philadelphia, Pa.; Dr. M. J. Rosenau, Boston, Mass.; Dr. Henry Sewall, Denver, Colo.; Dr. B. S. Veeder, St. Louis, Mo., and Dr. Allen K. Krause, Baltimore, Md., assures those who subscribe to this publication an unusually high grade of material. The further fact that the journal is published by the National Association for the Study and Prevention of Tuberculosis vouches for its standing and gives added assurance to its future.

The banking of the National Association for the Study and Prevention of Tuberculosis also makes it possible for the publishers to furnish the *Review*



at so moderate a price as \$3.00, which, to those who know anything about the cost of production of such publications, will readily appear as less than the cost of production. We are glad to recommend *The American Review of Tuberculosis* to our readers and urge them to add it to their subscription lists. Subscriptions should be sent to the New York office at 105 East 22nd Street, New York City.

---

## Correspondence

---

### MEDICAL RESERVE CORPS

• November 11, 1917.

*MEMORANDUM: To the Editors of Medical Journals in the United States.*

It is of the utmost importance that the medical profession throughout the country be kept informed in regard to the activities of the Surgeon General's Office, the Medical Section of the Nation Council of Defense in Washington, and the work of the State Committee.

There should be no difficulty in getting this information by writing directly for it.

The inclosed reprint gives specific and authentic information up to September, 1917.

Since then the situation of the Medical Reserve Corps in regard to numbers has become less acute. About 14,000 are commissioned and 7,000 are in the process of being commissioned.

Twenty-one thousand medical officers are sufficient for an army of 2,000,000 men.

The indications are that we will need a much larger army, and the medical profession of this country will be tested to its utmost capacity.

At a recent meeting in Chicago of the State Committee of National Defense it was decided to petition Congress to create a Reserve Medical Officers' Reserve Corps. When this is created every qualified physician at any age will be given the opportunity and honor to volunteer his services and be enrolled. After this every physician will be in a position either wear the insignia of the Reserve Medical Officers' Reserve Corps, or the uniform of active service in the Medical Officers' Reserve Corps.

From the new Reserve Medical Officers' Reserve Corps the Surgeon General will be able to select medical officers as they are required for service in France or at home.

The present great problems are:

The training of physicians in civil practice for military duty.

The protection of the army in training in this country from venereal disease.

The future great problems when our wounded begin to return to this country will be the reconstruction and re-education of the crippled soldiers.

The great and only necessity of the present is the successful carrying on of this war.

The medical journals should do all in their power to keep the profession properly informed and to stimulate them for this great endeavor.

JOSEPH COLT BLOODGOOD,

Chairman of Committee on Preparedness of the Southern Medical Association.

---

## Public Health

---

### RULES AND REGULATIONS FOR THE CONTROL OF VENEREAL DISEASES.

The State Department of Public Health has promulgated rules and regulations for the control of venereal diseases in force throughout the State on and after November 1st, 1917, with the provision of a fine of not more than \$200.00 or imprisonment in the county jail not exceeding six months, or both, for each offense in the violation of such rules.

It is incumbent upon the local health officer to carry out the provisions of these rules and regulations and those local officials who fail in the performance of their duty subject themselves to the fines and penalties prescribed.

The regulations require that every physician, nurse, attendant, hospital or dispensary superintendent, druggist, or any other person having knowledge of a known or suspected case of venereal diseases must immediately report the same to the local health authorities on a form or blank specified for that purpose. This form includes information as to the name, attendant, sex, color, age, and civil state of the individual, his place of residence, occupation, and employer, with specific information as to whether he is engaged in the handling of foods. The blank also provides for information as to the probable source of infection, the probable date of infection, and other known cases of infection acquired from the same source.

Under certain conditions the name of the patient, the address of the patient and the exact identification of the source of infection, may be omitted and a "key number" may be employed in place of the patient's name. These exceptions are: (a) that the patient is of good repute in his community; (b) regularly under the care of a reputable physician; (c) that the physician give the patient full instructions to be taken to prevent the

spreading of the infection and supply him with literature on the subject published or approved by the State Department of Public Health; (d) that the patient gives assurance of observance of all precautions, and (e) that the physician assumes the responsibility for the observance of all rules. In case the patient is in military or naval service, his name may be omitted, under the above conditions, provided the military medical officer of his command has been advised of the name of the patient and the character of his illness. Under the foregoing conditions the street address and the name and address of the employer may likewise be omitted in the report.

Immediately upon receiving the report of a venereal disease (defined in these rules as syphilis in the infectious stages, gonococcus, infection or chancroid), the health officer must notify the State Department of Health, and the military authorities provided the patient is in military service. The reports of these cases shall be treated by the local health officer and by the State Department of Public Health as confidential information so far as this may be consistent with the public health.

Whenever a case of venereal disease is found on premises used for immoral purposes or upon premises where the patient cannot be properly isolated and when the patient will not consent to removal to a hospital, the premises are to be placarded as in the manner employed in other communicable diseases.

All infected persons are prohibited from exposing others to infection. Visitors are not permitted to enter placarded premises and the infected individual is forbidden to leave such premises except with the consent of the local or state health authorities.

In those cases in which the correct name and address of the patient are not given, the physician assumes the responsibility for proper control of the case, and when a physician has cause to believe that the patient is violating the rules made for the protection of others, he will immediately notify the local health officer as to the name and address of the infected person.

The period of control of venereal diseases shall continue, in case of gonococcal infection, until at least two successive smears taken not less than forty-eight hours apart, fail to show gonococci; in case of syphilis, until all lesions of the skin or mucous membranes are all healed; in case of chancroid, until all lesions are healed.

It is strongly urged that all patients suffering from venereal diseases shall be removed to hospitals for treatment.

Any person suffering from venereal disease is prohibited from moving out of one health jurisdiction into another without first securing permission from the local health authorities of the community to which he desires to be removed or from the State Department of Public Health, and such

permission will be granted only on condition that (1) the object of removal shall be deemed urgent and legitimate; (2) that such removal can be made without endangering the health of others; (3) the patient agrees to place himself under the care of a reputable physician to be named in the removal permit, such physician to assume the responsibility of the care of the case, and (4) removal not to take place under twenty-four hours after notice has been sent by mail to the health officer at the proposed destination.

On receiving a patient thus transferred from another locality, the attendant physician is required to file a report of the case on the form used for the original report.

Persons suffering from venereal diseases are prohibited from engaging in the handling of foods, the nursing of children, or of the sick, or from employment where they may expose others to infection.

It is made the duty of the local health officer to ascertain the existence of infectious venereal diseases; to investigate all cases not under the care of reputable physicians and those cases which are nonreported and to ascertain the source of infection. The health officer shall use all lawful means to cause the examination of persons reasonably suspected of being infective and all prostitutes are presumed to be suspected cases.

The State Department of Public Health offers its laboratory service without charge, for the diagnosis of venereal diseases and further offers to furnish advice and counsel, by mail only, without cost. Persons are advised to secure prompt diagnosis and satisfactory treatment and are warned against medical quacks, patent medicines, druggists' prescriptions, etc.

Copies of the rules and regulations for the control of venereal diseases may now be had on application, while a circular of general information on the prevention and suppression of venereal diseases is in press and will be ready for distribution within a very few days.

---

#### NEW REGULATION ON DISTRIBUTION OF ANTITOXIN AND OTHER PREVENTIVE AND CURATIVE AGENTS.

On account of the urgent necessity for protecting the military forces in the several camps and cantonments in Illinois, the State Department of Public Health has used every effort to encourage morbidity and mortality reports and to enforce the laws and rules relative to such reports.

For the most part, the physicians of Illinois have complied cheerfully with the rules and regulations relative to the reporting of communicable diseases and the state law for the registration of births and deaths, and the vast majority have been quick to appreciate the tremendous importance of thor-



oughly efficient health regulations during the time of preparation for war. In certain sections and in certain isolated cases, however, the efficiency of the State Department of Public Health has been impeded through the incompleteness of Vital Statistics and both the civil and military population have been unnecessarily endangered through failure to report contagious and infectious diseases.

Partly as a war time measure, the State Department of Health has made the following ruling relative to the distribution of antoxin vaccines and other preventive and curative agents, effective in Illinois December 1st:

"After December 1, 1917, the free distribution of diphtheria antitoxin, antityphoid vaccine and other vaccines and sera will be confined to those physicians who promptly and fully comply with the law requiring reports of births and deaths and with the state rules and regulations for the control of communicable diseases, including the prompt reporting of all such diseases to local health authorities.

"Failure on the part of any physician to report the births, deaths, and communicable diseases occurring in his or her practice, or to enforce quarantine in accordance with the state requirements, will result in the issuance of instructions to all state distributing agents prohibiting further deliveries of free state antitoxin and other prophylactic agents to the offending parties."

This rule has been under consideration for some time and has received the approval and commendation of a large number of the more active health officers and prominent members of the medical profession.

---

#### STATE CLINICS AND AFTER-CARE OF POLIOMYELITIS

Several clinics have been established within the past few weeks in various sections of the state for the after-care of victims of anterior poliomyelitis. These clinics are under the direction of Dr. C. W. East, of the staff of the Department of Health, and the nursing service is under the direction of the Division of Child Hygiene and Public Health Nursing. The clinic at St. John's Hospital, Springfield, which was opened some months ago, will be continued and will receive patients on Thursday of each week. A new clinic has been established at Chicago Heights, receiving patients every other Friday, beginning November 30th, with a clinic at Ottawa to be open every other Monday, beginning December 3d. Additional clinics will be opened at Moline, Rock Island, and Oregon and physicians of these localities are invited to utilize the services of these dispensaries and to refer their patients to them.

It is not the purpose of the State Department of Health to undertake the treatment of patients except with the assistance of attending physicians.

Something over a thousand children suffering from the after-effects of infantile paralysis have been received up to this time at the Springfield clinic and at the clinic meetings held in conjunction with the various county medical societies.

---

#### INCREASE IN WORK OF STATE DIAGNOSTIC LABORATORY

The reorganization of the State Department of Public Health under the Civil Administrative Code and the general impetus given to public health work throughout the state within the past six months, has brought about a large increase in every phase of the work of the State Diagnostic Laboratory at Springfield and in the branch laboratories located in several sections of the state. During October and November of 1916 the laboratory at Springfield examined the following number of specimens: October, tuberculosis 192, diphtheria 289, typhoid 135, total 616; November, tuberculosis 178, diphtheria 248, typhoid 94, total 520. During October, 1917, these numbers had increased to tuberculosis 245, diphtheria 947, typhoid 118, paratyphoid A. 89, Paratyphoid B. 89, total 1,488. While November, 1917, the work of the laboratory was greater than at any time in the history of that organization, and the following numbers of specimens were examined: Tuberculosis 204, diphtheria 1,268, typhoid 99, paratyphoid A. 99, paratyphoid B. 99, total 1,769.

In addition to the general increase in the amount of work along the lines formerly covered by the laboratory, as there has been added activity on account of the many phases of diagnostic work undertaken within the past few weeks.

The laboratory formerly confined itself to the examination of specimens from cases presumed to be those of tuberculosis, typhoid fever, diphtheria, and malaria with Wassermann tests for those persons unable to pay for same. At the present time the laboratory has extended its service to the diagnosis of rabies, the examination of sections from tumors, the diagnosis of all cases of venereal diseases where a full history accompanies the specimen (although it is not necessary that the name or address of the patient be made a matter of laboratory record). Under a new rule all typhoid specimens are carried through the tests for paratyphoid A. and B.

---

#### TUBERCULOSIS DISCUSSED IN DOWN-STATE CLINICAL CONFERENCE

Perhaps one of the most significant meetings held in Illinois in recent years was that which took the form of a clinical conference on tuberculosis in Springfield on November 22, 23 and 24.

The meeting was held under the auspices of the State Council of Defense, the State Department of Public Health and the Illinois Tuberculosis Asso-

ciation. Medical health officers, physicians and others interested from counties in central and southern Illinois attended. About thirty counties were represented. The conference was the first of a series which eventually will be aimed to serve the entire state.

The clinical sessions were under the direction of Dr. O. W. McMichael and Dr. Ethan Allen Gray of Chicago, and Dr. George Thomas Palmer of Springfield.

County representatives present expressed and manifested keen interest in the clinical sessions. The discussions hinged on the following general topics: "Essentials of Early Diagnosis," "Local Agencies to Combat Tuberculosis," "Tuberculin in Diagnosis of Tuberculosis," "Diagnosis and Treatment of Tuberculosis," "The Case History in Early Diagnosis," "The Tuberculosis War Problem in the Military and Civil Population," "The X-Ray in the Diagnosis of Pulmonary Tuberculosis," "Tuberculosis of Bones and Joints," "Management of the Tuberculous Patient," "Living Out of Doors," "Diagnostic Methods," "Financing Community Tuberculosis Work," "Dispensary Methods for the Smaller Community," "Local Community Problems," "Summarizing Diagnostic and Dispensary Methods," "Laboratory Methods in Tuberculosis."

The clinical facilities at Springfield were excellent. The general work in early diagnosis being carried out at the Springfield Tuberculosis Dispensary; x-ray work and tuberculosis of bones and joints at St. John's Hospital; bedside care and management of the out-of-door patient at the Springfield Open Air Colony and laboratory methods in the diagnostic laboratories of the State Department of Public Health.

#### COMMUNICABLE DISEASES IN ILLINOIS

Reports which the State Department of Public Health have compiled for the three weeks of November ending the 10th, 17th, and 24th respectively, show, in a general way, a decreasing number of new cases of communicable diseases within the state. They also indicate, unfortunately, that reports of communicable diseases at the present time are not as complete as they should be.

Outside of the City of Chicago, new cases of chickenpox reported during the three weeks number 131, 112 and 110. Reported cases of diphtheria were 29, 32 and 34 for the three weeks. Measles show a decided increase during the week ending November 24th, due, to a certain extent, to an epidemic of that disease in Greene county. Scarlet fever has shown a steady decline and whooping cough, which reached a high point during the second week of November, decreased decidedly toward the end of the month.

Within the past two weeks the following unusual prevalence of communicable diseases was noted: Gibson City, typhoid fever, 15; Avon,

smallpox, 25; Lewistown, scarlet fever, 13; Oglesby, diphtheria, 10; Pearl and vicinity, smallpox, 9; Percy, smallpox, 9.

### Society Proceedings

#### ALEXANDER COUNTY

After the presentation and discussion of several interesting cases, at the regular meeting, November 15, of the Alexander County Medical Society, at the Association of Commerce rooms, Dr. Samuel Dodds read the paper of the evening, on "The Prevention of Tuberculosis from a Doctor's Standpoint." The discussion on the paper was opened by Drs. R. E. Barrows and W. H. Fields.

Acting on a request from the State Board of Health, the following committee was appointed by the president of the society, to form a committee on "Tuberculosis as a War Problem." The committee will consist of Dr. Dodds as chairman and medical director. Others besides the physicians will be asked to serve on this committee and it will co-operate with a like committee from the state at large in taking care of the problems in tuberculosis growing out of the war. Ten members were present at the meeting.

#### COOK COUNTY

##### CHICAGO MEDICAL SOCIETY

*Meeting October 10, 1917*

Demonstration of Clinical Cases (Illustrated with Lantern Slides), John F. Golden.

Discussion, D. N. Eisendrath and Nelson M. Percy.

"Some Observations on Military Surgery During One Year on the British Front," E. B. Neff.

Discussion, D. F. Hayes and J. G. O'Malley.

*Meeting October 17, 1917*

"Adenomyoma of the Recto-Vaginal Septum," Thomas S. Cullen, Baltimore, Md.

Discussion, Emil Ries.

"Some Medical and Surgical Problems of Prophylaxis in Eclampsia," W. H. Condit, Minneapolis, Minn.

Discussion, C. S. Bacon.

"Remarks on the Treatment of Cavernous and Plexiform Angioma," Francis Reder, St. Louis, Mo.

Discussion, A. E. Halstead.

*Meeting October 31, 1917*

"The Treatment of Internal Hemorrhoids," Chas. J. Drueck.

Discussion, J. Rawson Pennington.

"A Study of Anesthesia in Pregnancy and Labor" (Illustrated with Lantern Slides), C. Henry Davis.

Discussion, R. R. Ferguson and Bertha Van Hoosen.

"The Use of Quinin and Urea Injection in Goiter," Leigh F. Watson.

General discussion.



*Meeting November 7, 1917*

"Muscular Atrophy in Nerve Lesions, Demonstration of Animals," Herman Campbell Stevens.

Discussion, Dean Lewis and Hugh T. Patrick.

"Clinical Manifestations of Disease of the Gall Bladder; Review of 1,000 Operatively Demonstrated Instances," Frank Smithies.

Discussion, Milton M. Portis and Bertram Sippy.

"Are Our Present Methods of Combating Pulmonary Tuberculosis Equal to the Task?" J. L. Jacque.

Discussion, Harry Kahn.

*Meeting November 14, 1917*

Radium—(a) "Therapeutics," C. W. Hanford; (b) "Physics," Edwin Leman, Ph. D.

Discussion, Filip Kreissl and C. L. Best, Freeport, Ill.

"A Sutureless Skin Sliding Method for the Radical Treatment of Lung Abscess and Chronic Osteomyelitis," Emil Beck.

Discussion, E. Wyllys Andrews and L. L. McArthur.

*Meeting November 21, 1917*

"Are Our Present Methods of Combating Pulmonary Tuberculosis Equal to the Task?" J. L. Jacque.

Discussion, Harry Kahn.

"The Present Status of Abdominal Cesarean Section," Irving F. Stein.

Discussion, Rudolph Holmes.

"Bilateral and Recurring Ectopic Pregnancies," Aime Paul Heineck.

Discussion, Carl Beck and Emil Ries.

*Meeting November 28, 1917*

"The Diagnosis of Bronchiectasis, Lung Abscess and Allied Conditions" (Illustrated with Lantern Slides), C. P. Howard, Iowa City, Iowa.

Discussion, Robert Babcock, S. R. Slaymaker, E. Wyllys Andrews, Stanton Friedberg, John Ritter and M. J. Hubeny.

## CHICAGO LARYNGOLOGICAL AND OCTOLOGICAL SOCIETY.

*Meeting of May 22, 1917, Continued*

## SUSPENSION LARYNGOSCOPY

The apparatus employed is very simple and the instruments few. An ordinary surgical table that can be raised and lowered is suitable for attachment of the crane. They find the crane which was first devised by Killian perfectly satisfactory. For work on the epiglottis, Dr. Pollock suggested a spatula in which the tip is cut out in a crescent shape, the points reaching well toward the pyriform fossæ, thus allowing the center portion to be free and permitting direct approach to the epiglottis and the center of the base of the tongue. A Cordes punch biting forceps, with its several sized tips, a Killian alligator bronchoscopic forceps, a long-handled curet, and a few applicators for wiping away the little oozing, completes their list of instruments. The most frequent use of the instru-

ments is for examination and removal of microscopic specimens in suspected malignant disease.

Owing to the fact that carcinoma cells are sometimes implanted in neighboring healthy tissue by cutting or snaring away some of the tumor, Bloodgood has recently called attention to a method of using a cautery needle by which he surrounds the specimen to be removed, believing that he thus prevents such implantation. As it is impossible to use this needle in the epilarynx, Dr. Pollock suggested an especially long-handled cautery knife, with which he cauterizes an area completely around the specimen to be removed, thus obviating the danger of implantation. This danger is not so great in the interior of the larynx, owing to the fact that it is within a cartilage box.

As to the non-malignant growths, it is a very easy matter to remove the tumor which presents itself prominently with a Cordes biting forceps. In tubercular ulcerative laryngitis, where the actual cautery is indicated, or an application of trichloroacetic acid is necessary, this can be done easily and far more accurately than when using the indirect method. Dr. Pollock reported several cases in which suspension laryngoscopy had been done most successfully.

## DISCUSSION

DR. ROBERT CLYDE LYNCH (New Orleans) said he had maintained that suspension was preferable under general anesthesia until Dr. Israel had suggested powdered cocaine, which was now used in the great majority of adult cases. He thought this had added greatly to the comfort of the patient under local anesthesia, and so far there was no systemic effect of the cocaine used in that manner. He had practically done away with the necessity for an elaborate table; any ordinary table top which is strong enough to hold the patient suffices. He no longer drops the head over the edge of the table; this has two advantages—first, it is very much easier for assistants who are not accustomed to seeing suspension done or to help in a suspension, and very much easier for a physician or anyone to hold the head straight when it is resting on the table. Second, instead of putting the crane at the very end of the table it is put back as far as the horizontal portion of the crane will permit, with the handle of the crane simply swinging over the edge of the table. By getting the patient in the Johnson position for a view of the larynx the tension is lessened on the neck and hyoid bone and also on the upper teeth. To guard against injury to the lower teeth he had recently been covering them with a modeling compound.

In working on the epiglottis he places the spatula on the base of the tongue and then raises the jack, forcing the tip of the spatula down the lingual face of the epiglottis, and then extends the patient in that way obtaining a very good view of the whole face of the epiglottis and bringing into view the portion wherein the epiglottis lies above the anterior commissure of the vocal cords. In this work he uses a shorter spatula than for larynx work.

He reported thirty-three cases of simple papilloma in children. Thirty of these had been operated at one sitting and there had been no recurrence. They had used no medicine or application that would tend to inhibit a new growth. In one of the cases that had recurred he had reoperated a year ago and the growth had remained away since that time. One of the other cases had been operated on six times and the other four. The one operated six times had finally come to a tracheotomy. The child has a larynx that is as hard as wood, and yet there are true papillomatous growths down in the connective tissue. He thought this bore out the remarks of Green of Boston, that papillomas infect other tissues, for this child has a papilloma of the glottis and uvula and one at the junction of the supraglottic fold, which it never had before. He cited the case of a

man who had laryngeal tuberculosis with a large ulcer involving half the larynx and eating down into the arytenoid space so as to involve the cartilage and partially obstruct his breathing. His epiglottis had been removed in Denver. This man was suspended twice and on the first period suspension developed symptoms of asthma with a rise in temperature and had rather a stormy convalescence. He had a period of rest for six weeks and then a second anesthetic and had such a stormy time under the anesthetic that a tracheotomy was done, but they succeeded in doing all the second time they wanted to do the first, and the man was perfectly well now. He stated that if he had a similar case he would not wait for the necessity of having to do a rapid tracheotomy, but thought it was justifiable to do a tracheotomy for the anesthetic which would allow one to do all they wished at one sitting without subjecting a tubercular patient to a second anesthetic. In this case an internist had declared that the process in the chest was thoroughly arrested.

DR. JOSEPH BECK stated that when he first employed suspension laryngoscopy he had the head flat on the table. At that time he had never seen the procedure performed, had seen no pictures or anything else, and simply placed the patient flat on the table and attempted to see upwards, but could see nothing. Since he had recently seen Dr. Lynch in Memphis do a suspension operation with the head on the table he had tried it again, but could not see as well as with the head hanging over the table edge, so he continues doing the operation in the latter way.

He observed the contagion or spread of a papilloma very interesting and said that the little boy exhibited by Dr. Pollock had a perfect papilloma around the tracheotomy wound which was attached to the skin.

DR. POLLOCK, closing, said they had had no bad results in these cases from having the head hanging over the table, but that if Dr. Lynch obtained such good results with the supine position there must be something wrong with their technic and they would try his method again.

In treating papillomas they had used no medicine or cautery or anything of the kind, but in the carcinomatous or tuberculous conditions they had cauterized the area. In a great many of the cases the question of doing a tracheotomy arises, and in many instances they do this previously. Most cases referred to them come with the tracheotomy tube in position.

#### CHICAGO OPHTHALMOLOGICAL SOCIETY.

A regular meeting was held Monday evening, October 15, 1917, with the President, DR. PAUL GUILFORD, in the Chair.

#### A CASE OF HEREDITARY BILATERAL UPWARD COLOBOMA OF THE IRIS, WITH REMARKS ON HEREDITARY BLINDNESS.

DR. CLARENCE LOEB stated that although coloboma of the iris could not be justly classed among the very rare ocular malformations, it was not seen so frequently by any one man as not to excite interest. When it was bilateral and unaccompanied by any other developmental lesions, it was of additional interest. But when the lesion had an atypical location and a definite hereditary history running through five generations could be obtained, it certainly became worthy of being put on record.

Miss Z., a graduate nurse, was referred to him in January, 1917, for examination. He found that she had a bilateral coloboma as shown in the drawing which he had made. In the right eye, the defect was much greater than in the left. The remaining portion of the iris started just above the horizontal meridian, temporal side, curved downward and then upward to a point on the nasal side, slightly above that on the temporal. By transillumination, and looking far to the side, the margins of the lens could be seen

in the area where the iris was absent, but the ciliary body could not be seen. Moreover the fundus was absolutely normal.

In the left eye, the pupil was extended upward and temporally by the coloboma almost to the periphery, in a position corresponding to about 2 o'clock. A thin edge of iris persisted at this location. In this eye also there was no lesion of the fundus.

The right eye was almost amaurotic, owing to a high degree of myopic astigmatism, while the vision in the left eye was quite good after correction of a small amount of myopic astigmatism.

The patient was a very intelligent woman and repeatedly assured the author that wherever the anomaly had appeared in her family, it had partaken of the same character as in her eyes, namely, bilateral, upwards, and more pronounced on the right than on the left. At the author's request, the patient obtained a detailed family history.

In this family there were instances of both direct and indirect heredity. Counting each affected parent and his children, whether affected or not, as a separate family, there were seven families containing 20 children, of whom 10 or 50 per cent. were affected. There were two families in which the parents were not affected and the children were likewise normal. Finally, there was a case of indirect heredity of one child through an unaffected mother.

In an investigation into the subject of heredity diseases of the eye which the author made in 1908, he was able to collect the histories of 59 families of aniridia or coloboma of the iris. Out of 156 children, 116 or 74 per cent. were affected. This was a higher percentage than obtained in the family whose history he had just related. In addition, a search through the literature since 1908 had revealed other cases which were cited. If every affected parent was counted with his or her children as a separate family, there were 7 families showing a direct heredity. In these families, there were 22 children, of whom 12 were affected and 10 normal. In addition there was one family showing collateral heredity, 5 children; 2 affected and 3 not. He gave statistics of 10 families containing 30 children, of whom 19 were affected, and 11 not affected. If to these were added the families and children in the case he reported, there was a total of 17 families containing 50 children, of whom 29 were affected, and 21 not affected. If the present number of families and children was added to the previous statistics, there were 76 families with a total of 206 children, of whom 70 per cent. were affected.

It was thus seen that the anomalies of the iris were strongly dominant characteristics, tending to be inherited in about three-fourths of the children of a parent so affected. So far as the essayist knew, there had been no case recorded of the marriage of two parents with coloboma of the iris; consequently no statement could be made as to the effect of such a marriage upon the progeny. In cataract, however, the percentage was 60 per cent. in the case of both parents affected, and 58 per cent. in the case of only



one, practically the same. In retinitis pigmentosa, the percentage was 50 per cent. in the case of both parents affected and 50.6 per cent. in the case of only one, again practically the same. However, the number of families in both of these diseases where both parents were affected was so small that no definite judgment should be made.

#### DISCUSSION.

DR. FRANCIS LANE said that one usually thinks of coloboma of iris in the region of the cleft. After the lenticular vesicle has been formed and is covered with ectodermic structure, and the flask secondary to the optical vesicle has been born, the mesoderm grows from a portion of the optical vesicle which forms the cornea before the anterior chamber is formed. In this mass of mesoderm there is a slit in the connective tissue which forms the pupillary membrane on one side and the cornea on the other. This takes place before the iris grows out from the root of the ciliary body; then it is in close contact with it if the fissure is closed, but if there is failure of the fissure to close, one can understand why there is coloboma in that region. If there is failure of the separation of mesoderm which grows out later from this root between the lens and cornea, one can understand why coloboma can be situated in any position.

DR. LOEB, in closing, said the whole subject of the development of the iris, the choroid or optic nerve has never been definitely accepted. Many theories have been advanced, but where one gets coloboma of the iris in five generations of the same general character, hereditary influence must play an unusually strong part in bringing about one form of developmental anomaly.

#### THE MANAGEMENT OF SQUINT.

Dr. ROBERT Von der HEYDT read a paper on this subject, stating that from his observations on strabismus he would first exclude alternating squint in which cases there was found good vision and fixation in each eye, but the muscular imbalance of more than usual high degree, thus favoring alternating suppression of the images, also the well understood cases of squint in high hypermetropia where the accommodation necessary to overcome it brought with it an excessive convergence and thus produced a periodical and lateral permanent inward squint. These latter cases were promptly corrected by the early adjustment of correcting lenses to be worn constantly, thus correcting the refractive error, bringing about perfect fixation and fusion, therefore stereoscopic vision, and inhibiting the impending development of amblyopia in the converging eye.

It was the other kinds of squint that he wished to consider, the kinds that were less easily handled.

The first three or four years of life presented the critical period in which so much could be done to assist nature in establishing permanent ocular parallelism. This could only be accomplished by a thorough and early study of each case and its possibilities based on a full understanding of the etiological factors producing them.

About the more obscure cases it might be said in short that any factor present in one eye that retarded the development of fixation or made it less accurate in that eye, as, for instance, anisometropia, monocular high astigmatism, amblyopia or any lowered visual perception in it from any cause, would retard the de-

velopment of fusion and make it impossible. This in itself, the inability to learn fusion, because of the lowered fixation qualifications of one eye, would not in itself necessarily give rise to a squint; it would only predispose. If, however, there was added thereto in the same pair of eyes a tendency to deviation from any cause, a muscle imbalance, the development of a strabismus was inevitable. Expressed in other words, the visual undervalue of one eye plus a tendency toward deviation would bring about a squint. These cases were common, difficult to handle and, therefore, often neglected. Early attention was most important; delay favored the development of monocular vision, the one eye increasing its visual value by taking the work onto itself, the other learning more and more to suppress, with amblyopia exanopsia gradually increasing the difference between the two eyes, until nothing more could be done to coax back the reduced visual acuity.

The first step in the proper handling of the case was to win the confidence of the child, so that a careful retinoscopy could be done under a cycloplegic. It was best to introduce the child to the darkroom at the time of the first visit and give a few flashes with the mirror which proceeding was, as a rule, sufficient to avoid future rebelliousness. When the retinoscope disclosed a sufficient refractive error to reduce visual acuity or hypermetropia calling for several dioptries of accommodative effort, glasses should be given.

A period of sufficient length to enable the parents to teach the child the recognition of numerals was now allowed until the next visit. This was done whether glasses were given or not. This enabled one to make accurate records of the visual acuity of each eye, as on this factor was dependent the character of our efforts and by means of it we might measure progress in the management of the case.

The visual acuity of each eye with and without glasses, also how much that of the better could be reduced by a cycloplegic must constantly be borne in mind for the purpose of intelligently studying the squinting eye, its possibilities, and later the improvement in it. The use of atropin in the good eye to force the use of the mate was an old practice and the author pleaded only for the recognition of its limitations and its application in the selected number of cases which could be modified by this method. Results could only be obtained if one really forced the use of the bad eye and could only do so if one succeeded in making it temporarily the better eye of the two by the cycloplegic's action on its mate.

What good would it do, for instance, to thus lower the visual acuity of the good eye for a period of months or years, as was often done, if in spite of this blurring it still remained the one with best acuity? Therefore, the necessity of studying the visual acuity of both eyes under various conditions.

If atropinization of the good eye was sufficient to make it the secondary eye, he ordered its use according to the calendar in the following manner: first instance, beginning January 1st a drop twice daily

for three weeks, then stop and come in the last week of February. Resume March 1st for three weeks and continue in a like manner. If advisable, he deprived the better eye of its correcting lens during the atropin period and substituted a smoked lens. This called for the use of cycloplegics about half of the time, or even a longer period could be adopted, and made it necessary for the patient to make only six visits per annum. Parents would persevere, as a rule, if one made it reasonably easy for them.

He had in some cases continued the use of monocular cycloplegia beyond the sixth year and during school time ordered homatropin on Saturday and Sunday. If these methods could not be adopted owing to the lower visual value of the squinting eye, some method of occlusion might be tried. He used periodically a hollow black patch with adhesive strips, so arranged that there could be no peeking. A definite schedule was given to be rigidly enforced.

In a case of convergent squint in high hypermetropia existing for one and one-half years with marked amblyopia exanopsia by the use of atropin in the fixing eye for several years, according to the calendar system outlined before, he had measurably raised the visual acuity of the squinting eye and finally brought about parallelism.

Perseverence and the adoption of a definite system, if the latter did not impose too many duties upon the parents, would lead to surprisingly favorable results in the many cases so often left to permanent strabismus.

#### DISCUSSION.

DR. THOMAS FAITH stated that the essayist began by speaking of fusion, but later spoke more of parallelism than anything else.

There are many cases of squint that are corrected so far as parallelism is concerned, but the other two important things one ought to consider, namely, improvement in vision in the squinting eye and binocular vision are lost completely.

As to teaching children to recognize numerals, this can be done after a certain period, but in some of the cases that come early the ophthalmologist is obliged to try something else besides teaching numerals in order to obtain a record of vision and be sure whether or not the patients are improving. He has tried some of Worth's ideas like every one else who is doing work of this kind. One idea that is particularly valuable is to remove the correcting lense from the fixing eye which is kept under atropin and compelling the patient to see with the squinting eye, and if possible ascertain the amount of vision in the two eyes with the idea of determining which is the working eye under the conditions. One thing to keep in mind is to get binocular vision if possible, and this can only be obtained even with the amblyoscope after the vision in the squinting eye has begun to improve.

Another thing: by the periodical use of atropin, if we can get the squint transferred from the squinting eye to the fixing eye, we are likely to succeed.

As to the use of the amblyoscope, he has used it with considerable satisfaction and had adopted an idea that Dr. Schwarz is responsible for, that is, having patients use an amblyoscope at home. He has supplied a number of amblyoscopes in that way, and after the patients were through with them, he has taken them back at a reduced price, and has turned them over to other patients at the reduced price, so that one does not lose anything, and the patients' expense is small. The greatest trouble the ophthalmologist has is to teach parents to do what he wants them to do and to get them to take an interest in the case, aside from simply having

glasses fitted. In young children, of two or three years, the thing to do is first to put on correction, then make a sort of game each day for the youngsters in having them hunt out something in the house with the fixing eye occluded. It is surprising what interest children take in it if parents will teach them. The parents can find out what a child is particularly fond of, the playthings it is fond of, hide them, and compel the child with the fixed eye to find them. By measuring the distance the child is from an object when he recognizes it and names it, you can obtain an idea what amount of vision the child has.

He has tried to use the little balls that Worth uses, but has not succeeded very well with them because if the child knows exactly what he is looking for all the time, there is no way of determining whether he sees enough to distinguish the little round sphere, or whether he guesses at it.

*(To be continued)*

#### GREENE COUNTY

The October meeting of the Greene County Medical Society was held in the Opera House at Hillview, Ill., Friday, October 12, 1917.

The society was called to order at 11:45 a. m. by President O. L. Edwards. The minutes of the last regular meeting were read and approved.

The question of medical ethics was again brought up for discussion by Dr. McLaren and the question discussed pro and con.

Several questions regarding osteopathy, which were brought up at the last meeting and left open for further information, were answered by the Secretary, his information having been received from the Secretary of the State Board of Health.

The society adjourned at 12:30 p. m. for dinner, which was served at the Hillview Hotel.

The society convened at 1:30 p. m. and took up the matter of electing three examiners and three instructors to co-operate with the Red Cross Society regarding first aid work, as per request of the Secretary of the State Society. After much discussion Dr. H. Burns moved that the president appoint the three instructors and the three examiners and that they reside in Roodhouse, Carrollton and White Hall. Upon vote the motion carried and the following physicians were appointed: Instructors, Dr. Howard Burns, Carrollton; Dr. C. R. Bates, Roodhouse, and Dr. L. O. Frech, White Hall. Examiners, Dr. E. E. Jouett, Carrollton; Dr. H. W. Smith, Roodhouse, and Dr. W. T. Knox, White Hall.

Upon motion by Dr. Smith the Greene County Medical Society voted to purchase a fifty dollar Liberty Bond, the same to be paid for by per capita assessment.

The application of Dr. J. J. Lewis, of Hillview, for membership in this society was received and referred to the board of censors for action.

The following program was carried out:

"Rheumatism," Dr. W. T. Knox, White Hall.

"Case Reports," Dr. E. W. Fenity, Kane.

"Caloric Method of Infant Feeding," Dr. L. O. Frech, White Hall.



A most thorough discussion of all the papers followed.

The censors reported the next meeting, which is the annual meeting, would be held in White Hall, Friday, December 14, 1917.

Fifteen members were present.

L. O. FRECH, Secretary.

### HENDERSON COUNTY

The meeting of the Henderson County Medical Society was held at Stronghurst, November 6, in the Masonic Hall.

Eight members and four visitors were present.

Interesting papers were read by Drs. R. C. Matheny and J. F. Percy of Galesburg and by Dr. C. H. Magee of Burlington, Iowa.

The following officers were elected for the ensuing year: President, C. E. Kaufman, Oquawka; vice-president, E. E. Bond, Stronghurst; secretary-treasurer, J. P. Riggs, Media; censor, three years, J. P. Riggs; delegate, two years, I. F. Harter, Stronghurst; alternate, two years, H. V. Prescott, Dallas City.

Treasurer's report was read and approved.

Dr. Kaufman made motion to raise annual fees from \$3.50 to \$5.00, which was seconded and carried unanimously.

Petition from Dr. W. H. Wells from Peoria County for admission received and admitted.

J. P. RIGGS, Secy.-Treas.

### MONTGOMERY COUNTY

The annual surgical clinic of the Montgomery County Medical Society was held at the St. Francis Hospital, Litchfield, Tuesday afternoon, Oct. 30. The operator was Dr. W. R. Cubbins, Assistant Professor of Surgery at Northwestern University. There were a number of interesting cases and a good attendance from Montgomery and neighboring counties. Everyone enjoyed the clinic and all would be glad to have Dr. Cubbins with us again.

The following officers were elected for the year 1917-18: President, C. H. Lockhart; vice-president, J. R. Kenton; secretary, G. W. Cox; treasurer, C. H. Zoller; medico-legal, L. S. Brown; delegate to state society, G. W. Cox; alternate to state society, C. H. Zoller; censors, L. G. Allen, G. A. Sihler, Jr., and T. W. Williams.

### TRI-STATE DISTRICT MEDICAL SOCIETY

#### SECOND ANNUAL MEETING

##### *Abstract*

The second annual scientific and clinical meeting of the Tri-State District Medical Society was held at the Hotel Julian, Dubuque, Iowa, September 4, 5 and 6, 1917. The meeting was a large and notable one in every respect. It was largely through the efficiency and energy of the following Dubuque physicians that the meeting was a great success: Drs. H. G. Lang-

worthy, H. B. Gratiot, C. A. McGuire, J. C. Hancock, J. R. Guthrie, I. S. Bigelow, J. J. Rowan, B. Michel, A. M. Pond, A. M. Loes, C. A. Kearney, H. M. Phalas and J. R. Schrup. The ladies' entertainment committee, Madame H. B. Gratiot, chairman, and Mesdames J. R. Guthrie, W. P. Slattery, I. S. Bigelow, George Minges and C. A. Kearney, also deserves a great deal of credit.

Through the energy of Dr. D. G. Smith of Freeport, Ill., the director of concessions, a number of surgical instrument houses and book concerns were represented by fine displays.

The program committee, consisting of Drs. Lawrence H. Prince of Madison, Wis.; William H. Perry of Sterling, Ill., and C. A. McGuire of Dubuque, Iowa, had worked hard in preparing a program that few medical meetings have ever excelled. The program as published in the August JOURNAL was carried out in detail, with a few exceptions. The scientific and social sessions of the meeting were held in the gold room of the Hotel Julian. The address of welcome on behalf of Dubuque was given by County Attorney Hugh Stuart, who, as spokesman for the city, paid a high tribute to the members of the medical profession and stated that it was the wish of every Dubuquer that the attending physicians should enjoy the hospitalities of this city to the fullest extent. The response to the address of welcome was delivered by Dr. Emil Windmuller of Woodstock, Ill. Dr. Windmuller is councilor of the Illinois State Medical Society, and one of the livest wires in the medical profession of his state. In his address he expressed his gratitude for the manner in which the doctors had been received, the interest manifested by the Dubuque people in the convention and their cooperation in making it a success. He paid a compliment to the Dubuque physicians for the splendid way in which they had arranged for the doctors' entertainment, also as to their high standing in the medical profession. In closing, he stated that this meeting would go down in medical history as one of the finest medical meetings ever held in the middle west.

The first essayist on the program was Dr. Daniel Lichty of Rockford, Ill., his subject being "The Child's and Adolescent's Heart, Pathological Sequelae." The paper showed that Dr. Lichty had given a great deal of time to the study of this subject, and it was thoroughly discussed by Dr. Paul E. Gardner, councilor of Iowa State Medical Society, of New Hampton, Iowa.

Dr. H. A. Sword of Milledgeville, Ill., presented a paper on "Symptoms and Diagnosis of Gall Bladder and Duct Diseases." The doctor handled the subject in a masterly way. The paper was discussed by Dr. I. N. Crow of Marengo, Iowa.

Dr. George Kessel of Cresco, Iowa, then read a fine paper on "Abdominal Symptoms—Their Significance." Discussion was led by Dr. Wilson Cunningham, councilor of the Wisconsin State Medical Society, Platteville, Wis., who brought out many points of interest.

At the afternoon session of the first day Dr. J. T.

White of Freeport, Ill., presented a paper on "Prostatectomy Simplex, Another Plea in Conservation." The thorough way in which Dr. White handled the subject showed that he was very familiar with the technique of this operation. The paper was illustrated by first-hand drawings and actual photographs made for lantern slide presentations. The doctor emphasized three important points in his paper. First, the conservation of the health of the man past fifty by a simplified system of relieving the usual obstruction to which 60 per cent of these men are heir. He introduced a "three-phase" treatment instead of the usual one or two-step prostatectomy. The use of a prostatic gauze hemostat offers many advantages not possible with the Pilcher bag or any other hemostat, and this, used together with the three-phase method, makes the mortality from prostatectomies almost nil. An interesting discussion was led by Dr. J. E. O'Keefe of Waterloo, Iowa.

Dr. Henry G. Langworthy of Dubuque, Iowa, read an essay upon the "Practical Consideration of Accessory Sinus Disease with Special Reference to Non-Operative Treatment." Dr. Langworthy's paper was presented in such a way that even those who are not specialists in his line were benefited by it, and it was generally discussed.

Dr. T. W. Nuzum of Janesville, Wis., presented an essay entitled "Fracture of the Spine." This was one of the best papers read at the meeting and was ably and thoroughly discussed by Dr. C. L. Best of Freeport, Ill., and Dr. C. W. Hopkins of Chicago, chief surgeon of the Northwestern Railroad.

An excellent contribution to the program was presented by Dr. Henry Albert, professor of pathology and bacteriology, Iowa City, Iowa, in "Newer Studies in the Prevention of Diphtheria, with Special Reference to the Schick Test and Toxin-Antitoxin Immunization." Needless to say that this was one of the finest essays on the program, and we feel that the society is to be complimented in having among its members such an able essayist as Dr. Albert. Dr. Albert's paper was discussed by Dr. W. D. Stovall of Madison, Wis., and Dr. Guthrie McConnell of Waterloo, Iowa, both specialists in this line.

Dr. L. W. Littig of Davenport, Iowa, presented an essay on "Before the Operation and After"—a noteworthy contribution. Many points in his paper will be of benefit in our individual practice. The discussion of this paper was ably led by Dr. J. Forrest Bell of Elgin, Ill.

Dr. E. F. Murphy of Dixon, Ill., presented a complete essay on the "Indication for and the Technic of the Administration of Blood," showing great technical knowledge of this subject. Dr. J. H. Schrup of Dubuque, Iowa, ably discussed the paper.

The evening meeting of September 4 was taken up by an address in surgery by Dr. C. W. Hopkins, chief surgeon of the Northwestern Railroad. Dr. Hopkins took as his subject "Unusual and Interesting Fractures and Dislocations: Method of Treatment and Results." Every physician who heard Dr. Hopkins' address was well paid for his trip to Dubuque. Informal discus-

sion of Dr. Hopkins' paper was led by Dr. P. A. Bendixen of Davenport, Iowa, and Dr. A. M. Pond of Dubuque, Iowa.

Following Dr. Hopkins' address, vitagraphs of operation and technique of same illustrating bone surgery by Dr. Fred H. Albee of New York were shown. The opportunity of seeing these pictures of Dr. Albee's work was a rare treat for the physicians present and the society feels deeply grateful to Dr. J. H. Schrup of Dubuque for this privilege.

The morning of the second day of the meeting was partly devoted to clinics at Finley and Mercy Hospitals. The clinics were in charge of the Dubuque Clinic Committee, Dr. J. R. Guthrie as chairman. They were devoted entirely to clinical diagnosis and many interesting cases were brought before the physicians. Dr. Edward Ochsner presented a very interesting clinic at Mercy Hospital, the material for same being furnished by local physicians.

At 10 o'clock Dr. Grant W. Hatch of Rockford, Illinois, presented a paper entitled "Medical Treatment of Affections of the Nose and Throat." Many points in this paper were of value to the general practitioner. The paper was discussed by Dr. W. B. Small of Waterloo, Iowa.

Dr. J. J. Grant of Freeport, Illinois, spoke upon the subject of "Empyema of the Pleural Cavity" and presented a simple drainage apparatus for the continuous vacuum treatment of same. In a strong argument for the vacuum treatment of empyema he presented the following points: 1, Better drainage; 2, Immediate expansion of the lung; 3, Prevents formation of fibrous tissue (which forms in all abscess cavities) and allows the lung to come down in contact with the chest wall; 4, The duration of the disease is shortened; 5, It prevents the entrance of air into the pleural cavity, which is most distracting to the patient and detrimental to lung expansion, and has a tendency to diminish any pneumo-thorax present. Dr. Grant's paper was thoroughly discussed, the discussion being led by Dr. Robert White of Prairie du Chien, Wisconsin.

An address in surgery was delivered by Dr. Edward Ochsner of Chicago, the title of address being "A Specific for Every Pathological Micro-organism, the Ultimate Goal of Surgery." Dr. Ochsner's address was a rare treat to the large audience of physicians who were present. The address was followed by a very interesting discussion, which was participated in by Drs. Schrup of Dubuque, Iowa; Leitzell of Benton, Wisconsin; White of Clinton, Iowa, and others.

At 2 o'clock, Dr. William A. Pusey, Professor of Dermatology, University of Illinois, delivered a masterly address in medicine, taking as his subject, "A Critical Consideration of Some of the Present Problems in Syphilis." Dr. Pusey is at the present time in Washington, D. C., assisting the Government in preventing and controlling this



affection in the United<sup>d</sup> States Army. This address also excited a very interesting discussion, which was led by Drs. C. L. Best of Freeport, Illinois; Crawford of Cedar Rapids, Iowa; Cottrel of Savanna, Illinois; Bryan of Belle Plaine, Iowa; Shannon of Waterloo, Iowa, and others.

Drs. W. A. Pusey, C. W. Hopkins and Edward Ochsner were then extended a vote of thanks by this Society for their distinguished addresses and were made honorary members of the organization.

Dr. G. E. Crawford of Cedar Rapids, Councilor Iowa State Medical Society, read a valued treatise on the present status of blood pressure. Dr. Crawford is a master of this subject and the Tri-State was very fortunate in having him on the program. The discussion of this paper was efficiently handled by Dr. William T. Lindsey of Madison, Wisconsin.

A business session was convened at 4 o'clock and a report of the nomination committee, consisting of Drs. A. M. Pond, Dubuque, Iowa; D. G. Smith, Freeport, Illinois, and Wm. T. Lindsey, Madison, Wisconsin, was heard. The nominating committee presented the following gentlemen to fill the offices of the society for the coming year: Honorary president, Dr. James R. Guthrie, Dubuque, Iowa; president, Dr. W. B. Peck, Freeport, Illinois; first vice-president, Dr. C. A. McGuire, Dubuque, Iowa; second vice-president, Dr. E. S. Gillespie, Winona, Illinois; third vice-president, Dr. Lawrence H. Prince, Madison, Wis.; secretary and treasurer, Dr. Nelson C. Phillips, Freeport, Ill.

The committee on place of meeting for the next annual gathering presented a communication from the Madison Board of Commerce inviting the Society to hold its 1918 convention in that city. The invitation was accepted and it was voted to hold the next annual meeting in the capital of Wisconsin.

Dr. K. F. Snyder of Freeport, Illinois, delivered an essay on "Post Operative Oil Embolism—Its Symptoms, Etiology and Prevention." The Doctor's paper called attention to a comparatively rare, but important condition, which may occur in operation on the obese. He emphasized that special attention should be paid to prompt ligation of all severed veins and a careful coaptation of tissue in the closure of wounds as a means of prevention.

The meeting was then adjourned to a vitagraph studio, where Dr. Snyder completed his essay by presenting a number of fine vitagraphs illustrating his subject.

Dr. A. Alguire of Belvidere, Illinois, also presented some fine illustrations upon the repair of fractures, showing that his success in bone surgery was *par excellence*.

At 8:00 the doctors and their ladies were entertained by the Dubuque County Medical Society through their entertainment committee, headed by Dr. I. S. Bigelow, with a boat ride on the Mississippi. The finest of music and entertainment was offered on this trip, making the word Dubuque synonymous with generosity and hospitality.

The third day of the meeting was opened with a clinic at the hospitals. Dr. John B. Deaver, Philadelphia, Professor of Surgery of the University of Pennsylvania conducted a diagnostic clinic at the Finley Hospital. Dr. Guthrie and his committee had an abundance of material present and Dr. Deaver for over an hour and a half presented case after case to a large gathering of physicians; a ward in the hospital being supplied for this purpose. This was one of the best features of the meeting and the Tri-State feels deeply indebted to Dr. Deaver and the Dubuque committee for making it possible. Dr. Deaver also gave an address in surgery at 11:00 a. m., entitled, "The Applied Physiology of the Prostate Gland." Dr. Deaver's address was a strong argument for the suprapubic operation. The opportunity was given the physicians present of asking Dr. Deaver any questions pertaining to his address. This invitation was responded to by Drs. Schrup of Dubuque, Iowa; White of Freeport, Illinois; Nuzum of Janesville, Wisconsin, and Connell of Beloit, Wisconsin. Dr. Deaver then closed his address and was accorded a hearty demonstration by the large audience of physicians present.

The afternoon session of the third day was opened by an essay by Dr. F. W. Broderick of Sterling, Illinois, entitled, "Direct Laryngoscopy." Dr. Broderick's paper covered the field of laryngoscopy thoroughly, was listened to with close attention by the large audience present, and was discussed by Drs. L. Ostrom of Rock Island, Illinois, and Hatch of Rockford, Illinois.

Dr. McDonald of Aurora, Illinois, then presented a thesis entitled, "Gastroptosis." The large audience was well pleased with Dr. McDonald's paper and a hearty discussion was led by Dr. J. C. Hancock of Dubuque, Iowa.

The next paper on the program by Dr. D. H. Connell of Beloit, Wisconsin, entitled, "Some Difficult Diagnostic Surgical Problems," was thoroughly discussed by the attending physicians.

Dr. H. M. Orr of LaSalle, Illinois, delivered an essay entitled, "Diagnosis and Treatment of Pyloric Stenosis." He prefaced his paper by a patriotic talk which showed that the doctor was not lacking in patriotism and the enthusiasm with which this part of his address was received by the large audience of physicians showed that they were in hearty accord with this spirit.

The final treat of the scientific program was an address in surgery by Dr. Charles H. Mayo, president of the A. M. A., who chose as his subject, "Exstrophy of the Bladder and Its Treatment." The address of Dr. Mayo was closely listened to by a large gathering of physicians from all parts of the three states. The doctor's address was a fitting close of a medical and surgical program which had held the attention of a large and enthusiastic assembly of physicians during the three days' session.

The evening session of September 6, was taken

up with an annual banquet of the Medical Association held in the Gold Room of the Hotel Julian. Plates were laid for four hundred guests, Dr. Thomas E. Throckmorton, the efficient secretary of the Iowa State Medical Society, officiated as toastmaster. Dr. Throckmorton's ability in successfully handling medical meetings and banquets is well known, but we believe that on this occasion he out-generated his former efforts. From the time he assumed the toastmastership until he closed the banquet every one was in a happy frame of mind.

Dr. Deaver spoke in a patriotic tone of the present government crisis, and the duty of the physician to his country. Dr. Deaver's remarks were received with long applause, which did not cease until the Doctor made a number of bows. Dr. Charles Mayo was the next speaker. He spoke of the recent advances in medicine and surgery with special application to the war conditions. He also, like Dr. Deaver, called attention of the physicians to their duty to their country at this time. By the time Dr. Mayo had finished his address, the audience was in a very enthusiastic frame of mind and Dr. Mayo was compelled a number of times to rise to his feet in acknowledgement of the spirit.

Major E. B. Coolley, Danville, Illinois, president Illinois State Medical Society, entertained the doctors with a very able and patriotic address. Major Coolley always has the faculty of saying the right thing at the right time. He referred in a complimentary manner to the distinguished physicians who had spoken before him, also of the honored guests who were to follow him, Governors Harding of Iowa and Lowden of Illinois. Major Coolley has a very clear vision of the future and staked his reputation in a prophecy (which we all feel willing to back) that Governor Lowden was only a temporary resident of Illinois and that the time was near at hand when our nation would claim him as its chief executive. Major Coolley's remarks were received with hearty applause.

Hon. William L. Harding, Governor of Iowa, spoke in terms of praise of the medical profession and the opportunity it had in helping to defend the country in the present crisis. The Governor said, "I deem the opportunity of addressing the Tri-State Medical Society one of the rarest privileges that has been accorded me during my experience in public life. It is an inspiring occasion and I only hope that my efforts are worthy of the importance of the event." Governor Harding also spoke in glowing terms of Governor Lowden of Illinois. He said that Governor Lowden was raised in Iowa and that they had only loaned him to Illinois; that some day in the near future they were going to reclaim him, as he believed that Governor Lowden was on the way to the White House. The applause that greeted Governor Harding's remarks lasted for many minutes and only ceased when the Governor had responded with a number of salutations.

The last speaker at the banquet was Governor

Lowden of Illinois. The deep appreciation of the Governor's presence caused a demonstration on both the part of the doctors and the ladies that compelled the speaker to wait for a considerable time before beginning his address. The Governor spoke in an earnest and convincing manner in regard to our duties as American citizens in the present crisis. He paid tribute to the distinguished medical guests present and spoke in praise of the medical organization. He said that he considered the opportunity of addressing this society a great privilege and that the pleasure of doing so would long be remembered by him. Governor Lowden's remarks were frequently interrupted by applause especially when he referred to state and government affairs. There was an energetic exhibition of feeling on the part of the entire audience at the close of the Governor's address, which continued until the toastmaster had to come to the Governor's rescue and insist that it was time for the guests to catch their trains.

Doctors Deaver and Mayo, and Governors Lowden and Harding were made honorary members of the association.

A vote of thanks was extended to the Dubuque physicians for the splendid hospitality extended the visiting physicians.

The committee on resolutions then presented their report as follows:

*Mr. President and Members of the Tri-State District Medical Society:*

Your committee on resolutions herewith tenders its report, viz.:

Be it *Resolved*, that we, the members of the Tri-State District Medical Society, in convention assembled, do hereby express our sincere appreciation and thanks for the splendid hospitality extended to us by the people of Dubuque.

We are especially indebted to the members of the Dubuque County Medical Society and the ladies of Dubuque associated with them for their interesting efforts and generous entertainment;

And be it further *Resolved*, that we wish to sincerely thank the guests of this Society for their able papers and their interesting clinics. Be it further

*Resolved*, that the following guests, Dr. C. W. Hopkins of Chicago, Dr. Edward Ochsner of Chicago, Dr. William A. Pusey of Chicago, Dr. John B. Deaver, Dr. Charles H. Mayo, of Rochester, Minnesota, be made honorary members of this Society.

Be it further *Resolved*, that we extend our thanks to their Excellencies, Governors Frank O. Lowden of Illinois, and William L. Harding of Iowa, for their presence and participation in our meeting.

Further *Resolved*, That the members of this Society, in convention assembled, pledge their unswerving loyalty and service to the Government of the United States in the great conflict in which it is engaged, and that they express their unanimous



and whole-hearted commendation of the patriotic utterances and acts of the Governors of Iowa, Illinois and Wisconsin, the great commonwealths of the Middle West, whose sons have proudly borne their banners to the forefront on every occasion of national stress and peril.

WILLIAM A. CUNNINGHAM, Platteville, Wis.,  
Chairman.

T. W. NUZUM, Janesville, Wis.,

A. ALGUIRE, Belvidere, Ill.,

J. C. HANCOCK, Dubuque, Iowa,

C. L. BEST, Freeport, Ill.,

EDWIN S. GILLESPIE, Winona, Ill.,

Committee on Resolutions.

## Personals

Dr. W. J. Donohue, Plainview, has been appointed game warden for Macoupin County.

Dr. Wm. M. Craig, Kenney, has retired, selling his practice to Dr. Fred Blome of La Hogue.

Dr. C. A. Frazee, Springfield, sustained a double fracture from cranking his car, November 7.

Lieut. A. L. Stebbings, of Marseilles, enjoyed a ten-day furlough while preparing to be sent to Honolulu.

Dr. Edward A. Glasgow was elected president of the First National Bank of Mulberry Grove, November 5.

Dr. Esther Lovejoy of Portland, Ore., is said to have been commissioned first lieutenant by the French government.

Dr. Joseph B. Liston, Carlinville, has been appointed a member of the staff of the Jacksonville State Hospital.

Dr. W. J. Eddy, Shelbyville, sustained a Colles' fracture on cranking his car for the first time after the car was rewired.

Dr. Silvio Von Rueck, of Asheville, N. C., addressed several meetings in Peoria last month at factories, hospitals and clubs.

Dr. Rachel Yarros, Chicago, addressed the conference of high school clubs of the Y. W. C. A. of the state at Springfield, November 17.

Dr. Martin L. Moyer, Hillsboro, was operated on in the Hillsboro Hospital, November 2, for nephrolithiasis, and is reported to be doing well.

Dr. Carl F. Raver, formerly health officer of

Aberdeen, S. D., has succeeded Dr. Ruediger as director of the Hygienic Institute of the tri-cities.

Capt. H. L. Thompson, after a course of six weeks at the Rockefeller Institute and Bellevue Hospital, will be assigned to the base hospital at Atlanta.

Dr. Edgar P. Cook, Mendota, has been appointed chairman of the co-operative committee to promote the antituberculosis campaign of the State Council of Defense.

Dr. G. F. Ruediger, for three years health commissioner of La Salle, Peru and Oglesby, has resigned and removed to Reno, Nev., where he will be director of the State Hygienic Laboratory.

Dr. Victor Lespinasse, Chicago, addressed the Galesburg Medical Society on "Sterility in Both Males and Females," November 6. The address was illustrated by lantern slides. After the lecture a reception was held at the Elks' Club.

Capt. E. C. Franing, U. S. M. R. C., addressed the students of Knox College, Nov. 15, on the sanitary control in modern war. As the local paper quotes him: "In every phase of the war science is brought to the front and is fighting this struggle."

Dr. Clifford C. Ellis, formerly a member of the staff of the Chicago State Hospital, Dunning, has been appointed assistant superintendent of the Watertown State Hospital, succeeding Dr. Edward A. Foley, transferred to similar duty at the Chicago State Hospital.

The following constitute the Local Committee on Arrangements for the session of the American Medical Association to be held in Chicago, June 10-14, 1918: Drs. Ludvig Hektoen, chairman; Charles J. Whalen, secretary; W. A. Pusey, John V. Fowler, Hugh T. Patrick, M. L. Harris, Charles F. Humiston, J. B. Herrick and Frank Billings.

Major William J. Swift, Chicago, commanding the Field Hospital Section of the Thirty-Third Division, Camp Logan, Houston, Texas, has resigned, and his resignation has been accepted, to take immediate effect. Major Eugene G. Clancy, Chicago, formerly of the Seventh Illinois Infantry, and later commander of the One Hundred and Thirtieth Field Hospital, has been appointed Major Swift's successor.

## News Notes

—Two women graduates of snide medical schools in Chicago are at present under investigation as abortionists.

—As a result of the four days' White Elephant Sale, held in the old Calumet Club Building, November 7 to 10, \$25,369 was raised for the Children's Memorial Hospital.

—Another case that has received more advertising than it deserves is the H. J. H—— baby, which is taking "deadly drugs that will kill it in a few months." What did you say, deadly?

—It is reported that the first licenses for the use of German patents were issued by the federal trade commission, November 27, to three chemical manufacturers for the production of salvarsan.

—Drs. Frederick Tice and Adolph Hartung, of Chicago, and Dr. George Thomas Palmer, of Springfield, were speakers at the meeting of the Henry County Medical Society, at Kewanee, November 14.

—Physicians who find it difficult to collect their accounts would do well to consider the case of one Carme Romano against the Lindlahr Sanitarium for false imprisonment. Romano admits that he had to give up \$20 before he was released.

—At the meeting of the German Hospital Association, held November 15, the question of changing the corporate name of the institute from "The German Hospital of Chicago" to "The General Hospital of Chicago" was voted down, and the institution will retain its original name.

—The Central Free Dispensary of Rush Medical College announces that the reconstruction of invalided soldiers and men and women physically unfit who are needed in the industries will constitute an important part of the work of the institution during the coming year. Eighteen members of the staff of the dispensary are now in the army service.

—Dr. James D. Banta, of Rock Island, was convicted November 22 under the Harrison law. His case is claimed to be an aggravated one. Three other physicians and two druggists were convicted under the same law at the same term

of court in Peoria. The death of a dope victim from tetanus, due to the use of an infected hypodermic needle, figured in the case of Dr. Banta.

—Tuberculosis and its relation to the war was the subject of a conference at Springfield, November 22-25, attended by medical directors and health officers from central and southern Illinois. Meetings were held at the Springfield tuberculosis dispensary, the Open Air Colony and at St. John's Hospital. The meetings were under the auspices of the State Council of Defense, the State Department of Health and the Illinois Tuberculosis Association.

—Winnebago County Medical Society held a social meeting in Unity Hall, Rockford, November 12, to entertain the medical men connected with Camp Grant. Dr. Geo. P. Gill, in the absence of Dr. Park on military duty, presided as toastmaster. Lieutenant Colonel James M. Phalen, First Lieutenant Philip Lewin and Captain Harry S. Gradie, of Camp Grant, responded to their respective toasts. Miss Marian Culhane, daughter of Dr. T. H. Culhane, was the soloist of the evening.

—At the Forty-third Annual Meeting of the Southern Illinois Medical Association, held at Murphysboro, November 1 and 2, 1917, the following officers were elected for the ensuing year: President, Dr. E. C. Alvis, Benton; First vice-president, Dr. H. H. Roth, Murphysboro; second vice-president, Dr. Max Adles, DuQuoin; secretary-treasurer, Dr. A. B. Capel, Shawneetown; assistant secretary, Dr. C. W. Lillie, East St. Louis.

The next meeting of the Association will be held in East St. Louis.

—The readers of the JOURNAL will be sorry to learn of the serious illness of Dr. W. H. Gilmore, Secretary of the State Society. Dr. Gilmore was attacked by an infection of the carbuncle variety during the last of October. On November 18th he was removed to the Missouri Baptist Sanitarium at St. Louis, where a radical operation has given him relief, and he is at this date on his way to recovery. We hope the doctor will soon be at work again, and relieve Mrs. Gilmore of the secretary's burden.

—At the ninth annual meeting of the Illinois Association for the Study and Prevention of Tuberculosis, held in Champaign, November 9,



the following officers were elected: President, Dr. George Thomas Palmer, Springfield (re-elected for the seventh term); vice-presidents, Dr. William A. Evans, Chicago; Ethan Allen Gray, Chicago; Cecil M. Jack, Decatur, and Lewis C. Taylor, Springfield; secretary, Dr. Jeanette C. Wallace, Peoria; treasurer, Mr. David R. Forgan, Chicago; executive committee, new members: Dr. James W. Pettit, Chicago; Mrs. Joseph T. Mason, Aurora, and George W. Perkins, Chicago, and holdover members, Mrs. A. L. Adams, Jacksonville; Dr. Edward W. Fiegenbaum, Edwardsville, and Dr. Orville W. McMichael, Chicago.

## Marriages

KARL ALBERT MEYER, M. D., to Miss Faye Hart, both of Chicago, November 11.

EDGAR P. COOK, M. D., Mendota, to Miss Mary McIntyre of Dixon, in Chicago, November 3.

EUGENE EMMETT BIRMINGHAM, M. D., to Miss Theresa Celia Kelly, both of Chicago, October 24.

OSCAR WALTER REST, M. D., Chicago, to Miss Dora Lucile Lake of Madison, Wis., November 21.

ARTHUR FRANKLIN WOLFORD, M. D., Chicago, to Miss Nadine Wiley of Moberly, Mo., at Chicago, November 7.

LIEUT. FREDERICK CHRISTOPHER, M. R. C., to Miss Madeline Smith, both of Chicago, December 1. Lieutenant Christopher is attached to the Mobile Surgical Unit, No. 1.

LIEUT. NORMAN ZOLLA, M. C. Ill. N. G., assigned to One Hundred and Thirty-First Field Hospital Company, Camp Logan, Houston, Texas, to Miss Mary McGinty of Chicago, November 11.

## Deaths

MARTHA J. CREIGHTON, M. D., Chicago; Hahnemann Medical College, Chicago, 1884; aged 84; died at her home, November 14.

HERMAN MEYER, Chicago (license, years of practice, Illinois, 1878); aged 69; died at his home, November 3, from strangulated hernia.

MARTHA A. STEVENS, M. D., Downers Grove, Ill.; New York Hygieo-Therapeutic College, New York, 1861; aged 82; died at her home, November 2.

WILLIAM LEWIS TALLMAN, M. D., Chicago; Bellevue Hospital Medical College, 1881; aged 58; died at his home, October 27, from cerebral hemorrhage.

EDWARD L. STAHL, M. D., Chicago; Rush Medical College, 1883; aged 64; also a graduate of the Chicago College of Pharmacy; died at his home, November 12, from cerebral hemorrhage.

JAMES M. BARTHOLOW, M. D., Urbana, Ill.; Rush Medical College, 1871; aged 70; a member of the Illinois State Medical Society; a veteran of the Civil War; died at Champaign, Ill., October 8.

FRANK BLAIR LOVELL, M. D., Gibson City, Ill.; Rush Medical College, 1888; Bellevue Hospital Medical College, 1893; aged 51; a Fellow of the American Medical Association; died in the Presbyterian Hospital, Chicago, November 11, from typhoid fever.

MARSHALL CURTIS MUNN, M. D., Sycamore, Ill.; College of Medicine and Surgery, Physio-Medical, Chicago, 1893; Hospital College of Medicine, Louisville, Ky., 1895; aged 58; a member of the Illinois State Medical Society; died at his home, October 15, from tuberculosis of the larynx.

ESTELLA HORTON HOUGHTON, M. D., Chicago; Northwestern University Woman's Medical School, Chicago, 1899; aged 54; formerly a member of the Illinois State Medical Society; a specialist on diseases of the eye, ear, nose and throat; died in Wesley Hospital, Chicago, October 24, from cerebral embolism.

MARY O'BRIEN PORTER, M. D., Chicago; Kansas Medical College, Topeka, 1899; Northwestern University Woman's Medical School, Chicago, 1901; aged 47; a member of the Illinois State Medical Society, and a member of the staff of the Psychopathic Laboratory for the Municipal Courts; died at her home, November 18, from pneumonia.

LIEUT. ORLANDO MERRILL GOCHNAUR, M. R. C., U. S. Army, Freeport, Ill.; College of Physicians and Surgeons, Chicago, 1915; intern in the Calumet and Hecla Hospital, Calumet, Mich., and later in the Henrotin Memorial Hospital, Chicago; who went to France in September, and was on duty with the British forces in Flanders, is reported to have been killed in action, November 6.

BYRON C. STOLF, M. D., Wilmette, Ill.; Bennett Medical College, Chicago, 1873; aged 66; a Fellow of the American Medical Association; a pioneer resident of Wilmette, and a well known physician of the north shore; a member of the medical staff of the Evanston Hospital since its foundation; who was run down by an automobile, October 30, in Wilmette, died from his injuries, November 2.

JOHN H. WOOD, M. D., Champaign, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1878; aged 74; a veteran of the Civil War; formerly mayor of Deland, Ill.; died at his home in Champaign, October 18, from malignant disease.

## Book Notices

**A MANUAL OF ANATOMY.** By Henry E. Radasch, M. Sc., M. D., Assistant Professor of Histology and Embryology in the Jefferson Medical College, Philadelphia. Octavo of 489 pages with 329 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, \$3.50 net.

A manual intended for the first year student, filling the space between the large works of anatomy and the small.

It is well gotten up, the illustrations are many, and good. It should be a most useful book for the study of anatomy, for students and nurses.

**DISEASES OF WOMEN.** By Harry Sturgeon Crossen, M. D., F. A. C. S., Associate in Gynecology, Washington University Medical School, and Associate Gynecologist to the Barnes Hospital, Gynecologist to St. Luke's Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians and Gynecologists. 4th edition, revised and enlarged with 800 illustrations, 1,149 pages. Price, \$7.50. C. V. Mosby Co., St. Louis. 1917.

This new addition of Crossen stamps it as one of the best works on the diseases of women. A careful perusal of this edition brings to light many new additions, principally the chapter on the glands of internal secretion and their relationship to various gynecological conditions. Much revision and many new illustrations are observed.

It should prove to be as valuable to the general practitioner as to the gynecologist. The success of the previous editions should be greatly increased by the present edition.

**HISTORY OF MEDICINE.** Suggestions for study and Bibliographic Data. By Fielding H. Garrison, A. B., M. D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C., second edition revised and enlarged. Octavo of 905 pages with many portraits. W. B. Saunders Company, Philadelphia and London. 1917. Cloth, \$6.50 net; half morocco, \$8.00 net.

This fascinating subject is extremely well presented by Garrison in this new edition. It is a work that presents the subject in an exceedingly interesting and readable form, one that required a great deal of time and labor. It should be appreciated greatly by the physician, as it offers him a great opportunity to gain a knowledge about the men that have to do with medicine from the earliest known period to the present. This volume should find a place in every doctor's library.

**CHICAGO MEDICAL DIRECTORY.** 32d annual edition. Containing a list of Physicians and Surgeons of Cook County, Druggists, Medical Schools, Hospitals, Sanitariums and Medical Societies. Physi-

cians and Druggists' Street Directory, Numerically Arranged. 1917. Price, \$3.00. Copyright, 1917, by McDonough & Company, Publishers, 416 S. Dearborn street, Chicago.

The Chicago Blue Book is the most complete directory of Chicago physicians, druggists, hospitals, medical societies, etc., that is published. It is a useful directory not only to Chicago physicians, but will be of service to down-state physicians as well. The JOURNAL acknowledges a copy.

**MANUEL OF LABORATORY DIAGNOSIS.** By Stella M. Gardner, M. D., and Mary C. Lincoln, Ph. B., M. D., formerly Assistant Professors of Laboratory Diagnosis, College of Medicine, University of Illinois. Price, \$1.25. Chicago Medical Book Company, Chicago. 1917.

This book treats the subject of the clinical examination of blood, urine, stomach contents, feces, human milk, spinal fluid and sputum. The Wassermann reaction is discussed and the technic of the test given in detail. The chapter on bacteriology gives practical methods of examination and diagnostic characteristics and significance of the important pathogenic bacteria.

A multiplicity of methods is avoided; as a rule, one practical test in each case is given in sufficient detail to be used even by the inexperienced student.

The diagnostic significance of findings is presented in tables or brief discussions, a feature seldom included in small handbooks.

The book is designed as a guide for students of medicine, internes or other workers in hospital laboratories, and for physicians.

**THE PHYSICIAN'S VISITING LIST FOR 1918.** Sixty-seventh year of its publication. P. Blakiston's Son & Co., 1012 Walnut street, Philadelphia. Sold by all Booksellers and Druggists.

This is the regular annual physician's visiting list, published by P. Blakiston's Son & Company, and is uniform with previous editions. It contains the usual dose tables.

**IMPOTENCE AND STERILITY.** With Aberrations of the Sexual Function and Sex-Gland Implantation. By G. Frank Lydston, M.D., D.C.L. Price, \$4.00. Sold by subscription only. Sent postage prepaid on receipt of subscription price.

This work is the result of much thought, experimentation and actual practice by a pioneer in this field. Dr. Lydston's work in this field is known personally to a great number of practitioners, and to them the issuance of this volume will be welcome. The subject is covered in the author's characteristic way, and is highly interesting.

His results, as reporter, are good, and if further observation proves the adaptability of his methods, they should be epoch making.



# Illinois Medical Journal

OFFICE OF PUBLICATION 3338 OGDEN AVENUE. CHICAGO

Vol. XXXII, No. 1

CHICAGO, JULY, 1917

\$2.00 a Year

## CONTENTS

ORIGINAL ARTICLES		PAGE		PAGE
Injuries of the Head, with Special Reference to Intracranial Complications. <i>Thomas A. Davis, M. D., Chicago</i> .....		1	The Tonsil as a Portal of Entry in Tuberculosis of the Cervical Glands. <i>Walter B. Metcalf, M. D., Chicago</i> ..	19
The Lower Abdominal Incision. <i>Henry T. Byford, M. D., Chicago</i> .....		10	The State Hospital—Its Purposes, Limitations and Handicaps. <i>W. M. Hotchkiss, M. D., Jamestown, N. D.</i> .....	23
Diabetes: The Initial Fast and Tolerance Testing. <i>Everett J. Brown, M. D., Decatur, Ill.</i> .....		12	Incipient Psychoses. <i>G. H. Moody, M. D., San Antonio, Tex.</i> .....	27
Splenectomy for Hemolytic Icterus. <i>Charles A. Elliott, M. D., Chicago</i> .....		18	Care of the New Born. <i>Thomas Warloe, M. D., Chicago</i> .....	28

(Continued on page 32)

Entered as Second-Class Matter August 28, 1913, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879.

## JUST READY

# The New Mayo Clinic Volume

This volume embraces all the clinical teaching, all the important papers of W. J. and C. H. Mayo and their Associates at The Mayo Clinic of the year 1916. Many of these papers did not appear until far into 1917. The work gives you, step by step, the development of their operative technic, their methods of diagnosis, the etiology, the symptomatology of the conditions, the histologic and pathologic findings, emphasizing *diagnosis and treatment*.

Some of the more important articles in this volume are: Radium treatment, roentgen diagnosis, surgery of the tonsils, syphilis and tuberculosis of the stomach, operations in cancer of rectum, diverticula of the bladder, surgery in cancer of the uterus, diagnosis and treatment of mammary conditions, surgery of the thyroid, splenectomy and indications for it, heart-block, transfusion in pernicious anemia, trifacial neuralgia, thoracic diseases and surgery, etiology of epidemic poliomyelitis, hospital problems of gonorrhea and syphilis, dental research; in all, 96 articles.

Octavo of 1015 pages, illustrated. By WILLIAM J. MAYO, M. D., CHARLES H. MAYO, M. D., and their Associates at The Mayo Clinic, Rochester, Minn. Cloth, \$6.50 net.

W. B. SAUNDERS COMPANY

Philadelphia and London

This Issue, 6,650 Copies

# Horlick's the Original Malted Milk

This is the package. Others are substitutes.



Palatable, agreeable and beneficial to infant, invalid and convalescent.

Horlick's Malted Milk Co., Racine, Wis.

## CLINICAL LABORATORY ANALYSES

For your own reputation and the health of your patients **Absolute Accuracy** in laboratory analyses are prerequisites.

**Quick Service** must accompany such work.

**We Have Built Our Reputation and a Big Business on These  
Ask Your Fellow Practitioners**

Accurate analyses of all secretions, excretions and body fluids

**Wassermann Test-Tissue Diagnoses-Autogenous Vaccines**

**LABORATORY OF  
PATHOLOGY AND BACTERIOLOGY**

Dr. Maximilian Herzog

Dr. Meyer D. Moledetzky

The Eleventh (11th) Floor

**Marshall Field & CO. Annex Building**

Suite 1130—25 E. Washington St.

**CHICAGO**

Two Telephones: Randolph 6552-6553





## During Pregnancy

**S**TANOLIND Liquid Paraffin is an admirable laxative for use during pregnancy. It produces no irritation of the bowel, has not the slightest disturbing influence upon the uterus, and no effect upon the fetus.

The regular use of Stanolind Liquid Paraffin in the later months of pregnancy is an effective means of avoiding some of the serious dangers attending the parturient state because of sluggish bowel action.

Stanolind Liquid Paraffin counteracts to a definite extent an unfortunate dietetic effect on the intestine in this manner; the concentrated diet of our modern civilized life contains so little indigestible material that the residue is apt to form a pasty mass which tends to adhere to the intestinal wall. Stanolind Liquid Paraffin modifies this food residue, and thus tends to render the mass less adhesive.

Stanolind Liquid Paraffin is mechanical in action, lubricating in effect. Its *suavity* is one of the reasons why increase of dose is never needful after the proper amount is once ascertained.

*A trial quantity with informative  
booklet will be sent on request.*

**Standard Oil Company**

(Indiana)

72 West Adams Street  
CHICAGO, U. S. A.

## *An Efficient Sugar for Infant Feeding*

means maximum tolerance, assimilability, and gain in weight with minimum digestive disturbances and diarrhoea for the infant. This is why nearly every pediatricist prescribes

# MEAD'S DEXTRI-MALTOSE

(MALT SUGAR)

**in feeding formulae for infants' diet**

Let us send you samples and literature fully describing the simplicity of using Mead's Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

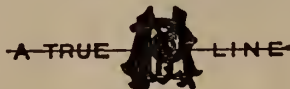
**MEAD JOHNSON & CO., EVANSVILLE, IND.**

There are many grades of crude drugs offered for sale on the drug market

*But—*

There is only one "best"

It takes the best grade of crude drug, the highest grade of workmanship, together with the most accurate and "time-tried" methods to make



**PITMAN-MOORE COMPANY, Chemists**  
INDIANAPOLIS, INDIANA



# HOYT'S GUM GLUTEN BAKED PRODUCTS DAINTY FLUFFS AND BISCUIT CRISPS

A summer substitute for  
Gluten bread. Easy to  
carry when away on trips  
or vacation.

For sale by agents every-  
where. Send for samples.

— THE —

**PURE GLUTEN FOOD CO.**

90 W. Broadway  
NEW YORK CITY

# Hay Fever

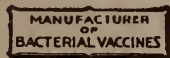
Successfully Treated with

## BACTERIAL VACCINES

Pollen irritation and breathing of the hot  
dust laden atmosphere favor the develop-  
ment of pyogenic bacteria in the respiratory  
tract which then becomes a primary factor of  
the disease.

Experience shows that the immunizing in-  
fluence of an appropriate bacterin will either  
cure the disease or so modify it that it causes  
but little distress. Use Sherman's No. 40.

Write for Literature.



**G.H. SHERMAN, M.D.**  
*Detroit, Mich.*  
U.S.A.



# The Winning Bran Food

We believe that Pettijohn's holds the  
leading place in bran foods.

Its sales have multiplied of late. And  
largely because physicians endorse it, we  
think.

It is soft rolled wheat with bran flakes  
hidden in it. It meets your demand for a  
natural food, which everybody likes.

It complies with your preference for  
flake bran, the efficient form.

Pettijohn's Breakfast Food and Petti-  
john's Flour supply bran foods in vast  
variety, and for every meal.

You will find in them exactly what you  
want.

# Pettijohn's

*Rolled Wheat with Bran Flakes*

Soft, flavory wheat rolled into luscious  
flakes, hiding 25 per cent of unground  
bran. A famous breakfast dainty.

Pettijohn's Flour is 75 per cent  
fine patent flour mixed with 25 per cent  
tender bran flakes. To be used like  
Graham flour in any recipe; but better,  
because the bran is unground.

**The Quaker Oats Company**  
Chicago (1892)

# RESPIRAZONE The Physician's First Thought in Hay Fever and Asthma

Samples to the Profession upon application

**THE TILDEN COMPANY** MANUFACTURING PHARMACISTS AND CHEMISTS

NEW LEBANON, N. Y.

ST. LOUIS, MO.

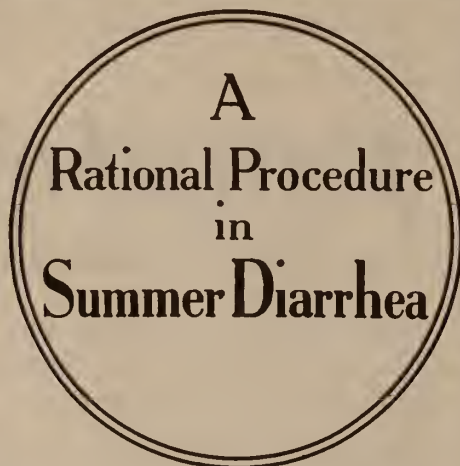
**THE Pennoyer**  
Established 1897  
Kenosha, Wis., between Chicago and Milwaukee on the North-Western R. R. Fine Health Resort and Sanitarium on Lake Michigan. Beautiful environment—a mile of lake shore. For illustrated prospectus address N. A. Pennoyer, M. D.

**KALMERID CATGUT**  
A Physiologically Correct Germicidal Suture  
DAVIS & GECK, INC.  
217-221 Duffield Street  
Brooklyn, N. Y., U.S.A.

**DOCTOR:** It is our purpose to give to you on your orders, the best pharmaceuticals that the highest grade of crude drugs, pure chemicals and skilled workmanship, under experienced supervision, can produce.

When our man calls upon you, give him a few moments of your time. He will tell you more about what we are trying to do.

**G. D. SEARLE & CO.** Mfrs. of Fine Pharmaceuticals and Hypodermic Tablets  
215-217-219 W. Ohio St. CHICAGO Telephone North 1704



## For Infants of any age

Mellin's Food  
4 level tablespoonfuls  
Water (boiled, then cooled)  
16 fluid ounces

Give one to three ounces every hour or two, according to the age of the baby, continuing until stools lessen in number and improve in character.

Milk, preferably skimmed, may then be substituted for water—one ounce each day—until regular proportions of milk and water, adapted to the age of the baby, are reached.



# For the Relief of Intestinal Fermentations Use Bulgarian Bacillus, Abbott (Galactenzyme)

There is no better treatment for the summer intestinal fermentative diseases and diarrheas than a pure, virile culture of the true Bulgarian Bacillus (Type A) which is to be found in **Galactenzyme (Abbott)**.

You will find it effective in Gastroenteritis, Bacillary Diarrhea, Autointoxication, Urticaria, and the various conditions due to intestinal putrefaction. For nursing babies Galactenzyme helps to maintain normal digestion. Galactenzyme is a practice builder. Try it. Remember there is a marked difference in the therapeutic action of the ordinary lactic-acid bacillus and the true Bulgarian bacillus. For the latter, always specify **Galactenzyme (Abbott)**.

## NO ADVANCE IN PRICES

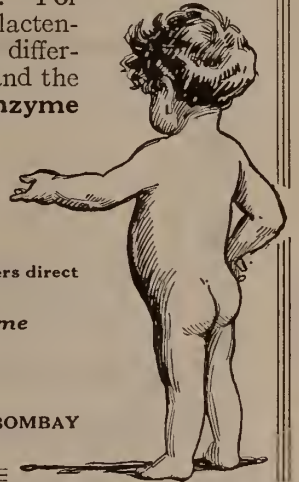
Galactenzyme Tablets (in bottles of 100), per dozen bottles.....	\$7.50
In less than half-dozen quantities, each.....	.75
Galactenzyme Bouillon, a pure Liquid Culture of Bacillus Bulgaricus, "A".....	
per dozen boxes of 12 generous vials.....	\$7.50
In less than half-dozen quantities, each.....	.75

Most druggists can supply you. (Jobbers are stocked.) If yours cannot, send your orders direct to our most convenient point. When prescribing, be sure to specify ABBOTT'S.

*Price list, Literature and Representative Samples on Request to Home Office and Laboratories*

## THE ABBOTT LABORATORIES

CHICAGO - NEW YORK  
SEATTLE      SAN FRANCISCO      LOS ANGELES      TORONTO      BOMBAY



# The Standard Laboratories

## MANUFACTURING PHARMACISTS

**Q**UALITY, SERVICE and PRICE of drugs are necessary to success in the practice of medicine. Our products are manufactured from the purest drugs and chemicals obtainable, under the most skillful supervision, and the service is prompt. Our prices are the lowest consistent with quality.

**YOUR ORDERS SOLICITED**

**2626-2628 Shields Avenue - CHICAGO, ILL.**

Phone Calumet 6090

We are pleased to announce to the Medical  
Profession the introduction of a

SMALL SIZE (6 oz.)

# Gray's Glycerine Tonic Comp.

(FORMULA DR. JOHN P. GRAY.)

The most important reasons for this new departure are briefly:

1. A convenient size for Rx.
2. To meet the conditions occasioned by the "high cost of living."
3. To insure proper filling of your prescriptions, and as a guard against Substitution.

The regular 16 oz. size will be continued as heretofore. We trust this innovation will be as cordially received by Physicians as has the 16 oz. size for the past 25 years.

THE PURDUE FREDERICK COMPANY,

135 CHRISTOPHER STREET, N. Y. CITY.

In the Treatment of

## Cystitis—Urethritis Pyelitis—Prostatitis—Bacilluria

### HELMITOL

ACTS AS

## *An Efficient Urinary Antiseptic*

Agreeable of Administration—Generally Well-Tolerated  
by the Gastro-Intestinal and Urinary Tract.

**Conveniently taken in Tablets, which readily dissolve.**

Supplied in 5 gr. tablets, bottles of 25 and 100, and in powder in ounces.

Samples and Literature supplied by

THE BAYER COMPANY, Inc.  
117 Hudson St., New York, N. Y.



# Chicago Pasteur Institute

26th YEAR

812 NORTH DEARBORN STREET

CHICAGO

FOR THE PREVENTIVE TREATMENT OF HYDROPHOBIA

ANTONIO LAGORIO, M.D. LL.D., Medical Director

G. B. BRUNO, M.D., Associate Director

FRANK A. LAGORIO, M.D., Associate Director

**Announcement**—When patients are unable to come to Institute, we can furnish physicians our course of Pasteur treatment by mail, in the State of Illinois. Telephone Superior 973.

*N. B.—We have no branches and the use of our name is unauthorized.*

**C**, How can you help to make the JOURNAL the best paying as well as the best reading Journal? *By buying from our Advertisers.* If you saw the “ad” in the JOURNAL, the advertiser is reliable.

## DON'T USE TYPHOID VACCINE ALONE

## USE TYPHO-PARA TYPHO VACCINE

For all immunizations, as it protects against both infections and costs no more than the typhoid vaccine alone.

### LIST No. 42

One Complete Immunization . . . . .	\$0.50
One 6 Mil (c.c.) Bulk Package . . . . .	1.00
One 20 Mil (c.c.) Bulk Package . . . . .	3.00
One Hospital Package (12 immunizations) . . . . .	3.50

## SWAN-MYERS COMPANY

Pharmaceutical and Biological Laboratories

INDIANAPOLIS

INDIANA, U. S. A.

# ILLINOIS STATE MEDICAL SOCIETY

## SECTION OFFICERS AND COMMITTEES

**SECTION ON SURGERY**  
 John S. Nagel, Chairman.....Chicago  
 H. A. Millard, Secretary.....Minonk

**SECTION ON MEDICINE**  
 C. Martin Wood, Chairman.....Decatur  
 S. R. Slaymaker, Secretary.....Chicago

**SECRETARIES' CONFERENCE**  
 Flint Bondurant, President.....Cairo

F. C. Gale, Secretary.....Pekin

**SECTION ON PUBLIC HEALTH AND HYGIENE**  
 Grace Campbell, Chairman.....Chicago  
 W. E. Park, Secretary.....Rockford

**SECTION ON EYE, EAR, NOSE AND THROAT**  
 J. Sheldon Clark, Chairman.....Freeport  
 Wesley H. Peck, Secretary.....Chicago

## COUNTY SOCIETIES

This list is corrected in accordance with the best information obtainable at the date of going to press.  
 County Secretaries are requested to notify The Journal of any changes or errors.

**Adams County**  
 J. L. Aleshire, Pres.....Plainville  
 Elizabeth B. Ball, Secy.....Quincy

**Alexander County**  
 J. W. Dunn, Pres.....Cairo  
 R. E. Barrows, Secy.-Treas.....Cairo

**Bond County**  
 W. T. Easley, Pres.....Greenville  
 J. C. Wilson, Secy.....Greenville

**Boone County**  
 Geo. Markley, Pres.....Poplar Grove  
 H. E. Delavergne, Secy.....Belvidere

**Brown County**  
 D. R. Peters, Pres.....Mt. Sterling  
 E. C. Allworth, Secy.-Treas.....Mt. Sterling

**Bureau County**  
 C. C. Barrett, Pres.....Princeton  
 M. A. Nix, Secy.....Princeton

**Calhoun County**  
 W. A. Skeel, Pres.....Kampsville  
 J. H. Peisker, Secy.....Hardin

**Carroll County**  
 G. E. Merchon, Pres.....Mt. Carroll  
 R. B. Rice, Secy.-Treas.....Mt. Carroll

**Cass County**  
 C. E. Soule, Pres.....Beardstown  
 W. R. Blackburn, Secy.....Virginia

**Champaign County**  
 J. H. Finch, Pres.....Champaign  
 John C. Dillenbach, Secy.....Champaign

**Christian County**  
 R. C. Danford, Pres.....Pana  
 S. B. Herdman, Secy.....Taylorville

**Clark County**  
 H. C. Houser, Pres.....Westfield  
 L. J. Weir, Secy.....Marshall

**Clay County**  
 C. E. Duncan, Pres.....Flora  
 R. D. Finch, Secy.....Flora

**Clinton County**  
 Orvil O'Neal, Pres.....Shattuc  
 J. Q. Roane, Secy.....Carlyle

**Coles-Cumberland County**  
 Wm. Smith, Pres.....Toledo  
 R. H. Craig, Secy.-Treas.....Charleston

**Cook County**  
 Chas. E. Humiston, Pres.....Chicago  
 J. V. Fowler, Secy.....Chicago

**Crawford County**  
 A. G. Brooks, Pres.....Stoy  
 C. E. Price, Secy.....Robinson

**DeKalb County**  
 Paul E. N. Greeley, Pres.....Waterman  
 J. B. Hagey, Secy.....DeKalb

**De Witt County**  
 J. M. Wilcox, Pres.....Clinton  
 S. L. Thorpe, Secy.-Treas.....Clinton

**Douglas County**  
 Floyd C. Phillips, Pres.....Arthur  
 Walter C. Blaine, Secy.....Tuscola

**Du Page County**  
 (Affiliated with Cook County)

**Edgar County**  
 Wm. A. Buchanan, Pres.....Paris  
 George H. Hunt, Secy.....Paris

**Edwards County**  
 W. E. Buxton, Pres.....West Salem  
 R. L. Moter, Secy.....Albion

**Effingham County**  
 Frank W. Goodell, Pres.....Effingham  
 F. Buckmaster, Secy.....Effingham

**Fayette County**  
 A. E. Greer, Pres.....Brownstown  
 Mark Greer, Secy.....Vandalia

**Franklin County**  
 Wm. H. Smith, Pres.....Benton  
 Edgar Austin, Secy.....Benton

**Fulton County**  
 J. C. Simmons, Pres.....Canton  
 B. E. Ray, Secy.-Treas.....Cuba

**Gallatin County**  
 J. W. Bowling, Pres.....Shawneetown  
 A. B. Capel, Secy.....Shawneetown

**Greene County**  
 O. L. Edwards, Pres.....Roodhouse  
 L. O. Frech, Secy.-Treas.....White Hall

**Grundy County**  
 Roscoe Whitman, Pres.....Morris  
 F. C. Bowker, Secy.....Morris

**Hamilton County**  
 E. S. Hall, Pres.....McLeansboro  
 P. M. Nation, Secy.....McLeansboro

**Hancock County**  
 Blair Kelley, Pres.....Ferris  
 S. M. Parr, Secy.....Carthage

**Hardin County**  
 W. J. J. Paris, Pres.....Rosiclare  
 F. A. Jones, Secy.....Rosiclare

**Henderson County**  
 W. J. Emerson, Pres.....Carman  
 J. P. Riggs, Secy.....Media

**Henry County**  
 Chas. F. Young, Pres.....Geneseo  
 P. J. McDermott, Secy.....Kewanee

**Iroquois-Ford District**  
 O. O. Hall, Pres.....Milford  
 W. L. Cottingham, Secy.....Paxton

**Jackson County**  
 W. A. Brandon, Pres.....Carbondale  
 H. G. Horstman, Secy.....Murphysboro

**Jasper County**  
 John Hamilton, Pres.....Bogota  
 James P. Prestlev, Secy.-Treas.....Newton

**Jefferson County**  
 E. E. Edmondson, Pres.....Mt. Vernon  
 Andy Hall, Secy.....Mt. Vernon

**Jersey County**  
 H. R. Bohannon, Pres.....Jerseyville  
 H. F. Threkeld, Secy.....Jerseyville

**Jo Daviess County**  
 A. T. Nadig, Pres.....Elizabeth  
 T. J. Stafford, Secy.....Stockton

**Johnson County**  
 C. D. Nobles, Pres.....Buncombe  
 H. W. Walker, Secy.....Grantsburg

**Kane County**  
 A. E. Diller, Pres.....Aurora  
 L. J. Hughes, Secy.-Treas.....Elgin

**Kankakee County**  
 C. W. Welzer, Pres.....Kankakee  
 E. S. Hamilton, Secy.-Treas.....Kankakee

**Kendall County**  
 R. A. Schaefer, Pres.....Plano  
 Robt. McClland, Secy.....Yorkville

**Knox County**  
 A. C. Keener, Pres.....Altoona  
 G. S. Bower, Secy.....Galesburg

**Lake County**  
 John P. O'Neil, Pres.....Highland Park  
 C. S. Ambrose, Secy.-Treas.....Waukegan

**La Salle County**  
 R. C. Fullenwelder, Pres.....La Salle  
 E. E. Perisho, Secy.....Streator

(Continued on page 26)



## LOYOLA UNIVERSITY SCHOOL OF MEDICINE

BENNET MEDICAL COLLEGE

Offers Special 4 Weeks' Summer Course in

## OPERATIVE SURGERY

Beginning July 15, Aug. 15

Special attention will be paid to the needs of men entering the Medical Corps of the U. S. Army or Navy. Individual instruction. Abundant Fresh Material. Write today for particulars.

1360 W. Fulton St.

CHICAGO

Buy from our advertisers.  
If they don't give as good  
or better value than others,  
kick to us—

*We'll do the rest*

## The STORM Binder and Abdominal Supporter

PATENTED



Special High Kidney Belt

MEN, WOMEN, CHILDREN and BABIES

No Whalebones. No Rubber Elastic.  
Washable as Underwear

High and Low Operations, Hernia,  
Relaxed Sacro-iliac Articulations,  
Floating Kidney, Obesity, Preg-  
nancy, Ptosis, Pertussis, etc.

Send for illustrated folder and Testimonials of Physicians.  
Mail Orders filled within Twenty-four Hours.

KATHERINE L. STORM, M. D.  
1541 Diamond St., PHILADELPHIA, PA.

## 50% Better Prevention Defense Indemnity

1. All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
2. Or his estate is sued, whether the act or omission was his own
3. Or that of any other person (not necessarily an assistant or agent),
4. All such claims arising in suits involving the collection of professional fees,
5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
6. Defense through the court of last resort and until all legal remedies are exhausted.
7. Without limit as to amount expended.
8. You have a voice in the selection of local counsel.
9. If we lose, we pay to amount specified, in addition to the unlimited defense.
10. The only contract containing all the above features and which is protection per se.

A Sample Upon Request

The  
MEDICAL PROTECTIVE COMPANY  
of Ft. Wayne, Indiana.

Professional  
Protection, Exclusively

A  
NEW  
BOOK



SEND  
FOR  
IT

## GRADWOHL BIOLOGICAL LABORATORIES

928 North Grand Avenue  
ST. LOUIS, MO.

R. B. H. GRADWOHL, M. D., Director

A LIMITED number of copies of "**Chemico-Biological Diagnostics**" will be distributed to interested members of the profession upon request. (Coupon attached).

This book gives up to the minute facts about modern diagnosis, the scope of laboratory consultations, and the interpretations of Micro-Chemical findings.

On every Wassermann specimen we do the **Hecht-Gradwohl Test**; (no additional charge).

**New Blood Chemical Tests** which have proven so valuable in nephritis, diabetes mellitus, gout and rheumatism.

### PASTEUR TREATMENT BY MAIL

Course of eighteen treatments by special delivery mail daily.

Write for literature on any phase of our work  
Slides, Containers, Fee Lists, etc., sent free

#### GRADWOHL BIOLOGICAL LABORATORIES

928 N. Grand Ave., St. Louis, Mo.

Please send me your booklet "Chemico-Biological Diagnostics"

Name.....

City.....

State.....

ESTABLISHED 1893

## Columbus Medical Laboratory

31 N. STATE ST., CHICAGO

ADOLPH GEHRMAN, Pres.

Send your *pathologic specimens* to us for diagnosis.  
We can assure you a valuable and prompt service.  
Write for instructions and fee table.

Let us make complete examinations in *post-mortem* studies.

Ask for advice in cases of *suspected poisoning* and toxicological work

Consult us when you have *medico-legal cases*.

COLUMBUS MEDICAL LABORATORY

Columbus Memorial Building

CHICAGO, ILL.



With the approach of warm weather, disorders of digestion and resulting intestinal disturbances become prevalent, particularly among infants and children. The treatment, when antiseptics are indicated, is often successfully met by—

## LISTERINE

As a vehicle for other required remedies and as an important part of the treatment of "Summer Complaints," physicians have, for many years, derived much satisfaction from—

## LISTERINE

Its well-defined antiseptic power, unobjectionable odor and taste, and the readiness with which it may be admixed with other drugs, has caused many prescriptions to be written and very good results secured from—

## LISTERINE

"The antiseptic selected for internal administration in these cases must not be astringent, strongly acid or such as will coagulate mucin, but, on the contrary, must be non-irritating, non-toxic and compatible with other medicinal agents likely to be prescribed in conjunction therewith." Such an antiseptic solution is—

## LISTERINE

Listerine literature, including "Acute Intestinal Infections of Children," mailed on receipt of professional card.

# Lambert Pharmacal Company

Twenty-first and Locust Streets,

St. Louis, Mo., U. S. A.

## RADIUM FOR RENT

BY

### THE PHYSICIANS' RADIUM ASSOCIATION of CHICAGO

(Incorporated under the laws of Illinois: "Not for profit")

Any case, in which radium therapy is indicated, is provided for in our large assortment of radium applicators. Loaned on application from any responsible physician, case having first been passed on by us after receipt of adequate information. Certain cases may be sent to our office for treatment. Moderate rental fees charged. For further particulars address

#### THE PHYSICIANS' RADIUM ASSOCIATION

1104 Tower Bldg., 6 N. Michigan Ave.,

Telephones: Randolph 6897-6898

CHICAGO

Board of Directors: WILLIAM L. BAUM, M.D.; THOMAS J. WATKINS, M.D.; FREDERICK MENGE, M.D.; WALTER S. BARNES, M.D.; ALBERT WOELFEL, M.D. Managing Director: ALBERT WOELFEL, M.D.



## CHICAGO LABORATORY CLINICAL ANALYTICAL

Marshall Field Annex Bldg.  
25 E. Washington St.

CHICAGO

Established 1904

Phone Randolph 3610

**M**ODERN equipment, combined with years of clinical and analytical experience, is at your service. Our reputation and names stand back of our work.

Serological Tests. Pathological Examination of Tissue. Autogenous Vaccines. Complement Fixation Test for Gonorrhea, Sputum, Smears, Pus, etc. Urinalysis, Complete Chemical and Microscopical. All work at moderate prices. Write for our fee table with instructions for sending specimens. Sterile containers and culture media on request. Prompt reports by mail, telephone or telegraph. During the summer season we urge the importance of an analysis of well waters and other sources of supply.

**RALPH W. WEBSTER, M.D., Ph.D.**  
*Director of Chemical Department*

**THOMAS L. DAGG, M.D.**  
*Director of Pathological Department*

**C. CHURCHILL CROY, M.D.**  
*Director of Bacteriological Department*





# HORMOTONE

The Dynamogenic Hormone Tonic for

## Asthenic Conditions

HORMOTONE has been used with success in the treatment of many intractable cases. It is primarily indicated in adrenal insufficiency, but is also useful in functional impotence, sterility due to ovarian insufficiency, amenorrhea, dysmenorrhea and menopausal disorders.

The Fatigue Syndrome Yields to  
Hormotone as to No Other Agent

DOSE: *One or two tablets three times daily before meals.*

In Neurasthenia associated with High Blood Pressure use

**HORMOTONE WITHOUT PITUITARY**

**G. W. CARRICK CO., 31 Sullivan Street, NEW YORK**



Trade Mark of  
The Society of Chemical  
Industry in Basle,  
Switzerland

*The premier digitalis*

is the digitalis which gives you  
results when others have failed

## DIGIFOLINE CIBA

will stand this test

according to the actual experiences  
of physicians

*Tablets and Ampoules*

Send for Literature

## A. KLIPSTEIN & COMPANY

New York

# A harvest of health MALT

**C**AREFULLY selected barley malt, the rich ripe grain, gorged with soluble carbohydrate nutriment, constitutes part of the raw material used in the manufacture of *Ovaltine*.

*Malt sugar* is this soluble carbohydrate nutriment, acknowledged by the medical profession to be one of the most assimilable forms of sugar. Present too, is the *digestive ferment diastase*, active, living, unimpaired by process of manufacture.

And then the protein and fat ingredients of *Ovaltine* contributed by wholesome farm products, *Milk* and *Eggs*, add their quota to this ideal, well balanced food combination.

*Ovaltine* is flavored with pure, soluble cocoa.

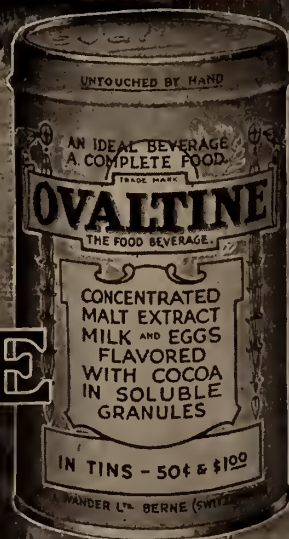
## OVALTINE

For samples and facts about *Ovaltine*, write—

**THE WANDER COMPANY**

Dept. 4 23 N. Franklin Street, Chicago

Dr. A. Wander Co., Ltd., established 1865, Berne, Switzerland, enjoys confidence of medical profession throughout every country in Europe.



**A Complete  
Food Beverage**





# MENNEN

## KORA-KONIA

# Try it *yourself* Doctor

**KORA-KONIA** for the Doctor's own use—is valuable in many ways. After a busy day when occasion calls for a cooling, soothing, healing powder use **KORA-KONIA** and you will get first-hand knowledge of its efficiency.

**KORA-KONIA** soothes and aids in healing tired, blistered feet, raw, chafed surfaces, skin abrasions, insect bites, prickly-heat, sunburn, cuts, minor wounds and burns.

ON REQUEST—we will send you an order on your Druggist for regular size package—25c. We want you to have **KORA-KONIA** in your own home to try it by test and find out its many valuable uses.

**THE HOUSE OF MENNEN. NEWARK. N. J.**

### ORDER FOR *FREE* PACKAGE OF **KORA-KONIA**

*For Physicians and Surgeons ONLY*

Tear off and mail to the House of Mennen, 42 Orange St., Newark, N. J., Dept. K

Without any obligation on my part send me through my druggist a full size package of **KORA-KONIA**.

Druggist's Name \_\_\_\_\_

Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

Ordered by Doctor \_\_\_\_\_

Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

# We invite comparison

---

When you administer a hypodermatic tablet solution you want prompt action. You want a definite therapeutic result.

If you use a tablet of our manufacture you have assurance that both objects will be achieved.

## HYPODERMATIC TABLETS

P. D. & CO.

are prepared from rigidly tested materials—materials that are guaranteed as to identity, purity and potency.

Hypodermatic Tablets, P. D. & Co., insure definite dosage. The content of each tablet is accurately determined. The medicament is uniformly subdivided by an unerring mechanical process, giving assurance that the active component is present in the precise amount indicated by the label.

Hypodermatic Tablets, P. D. & Co., are freely soluble. They dissolve completely in lukewarm water in a very few seconds.

Hypodermatic Tablets, P. D. & Co., are molded by a process that insures firmness. They are not liable to break or crumble in shipping or handling.

Test our hypodermatic tablets with those of any other manufacture. *We invite comparison.*

### TUBES OF 25 TABLETS.

With a very few exceptions Hypodermatic Tablets, P. D. & Co., are supplied in tubes of 25. Certain competing tablets are marketed in tubes of 20. Specify "P. D. & Co." on your orders. Get 25 tablets in a tube, not 20.

Home Offices and Laboratories,  
Detroit, Michigan.

## Parke, Davis & Co.



# FELLOWS' SYRUP

Differs from other preparations of the Hypophosphites. Leading Clinicians in all parts of the world have recognized this important fact. **HAVE YOU?**

**TO INSURE RESULTS,  
Prescribe the Genuine**

**R Syr. Hypophos. Comp. FELLOWS'**

**REJECT** < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL WARPS, CO. LTD.  
25 CHRISTOPHER ST.  
NEW YORK

## TUBERCULOSIS - ALBUQUERQUE, NEW MEXICO

Climatic Conditions Unsurpassed  
Altitude 5000 feet  
In the LAND OF SUNSHINE

Experienced Medical Supervision  
Trained Nurses in Constant Attendance  
All Approved Therapeutic Measures Employed

*The Murphey Sanatorium*



A High-Class Institution for the Treatment of Tuberculosis.  
Forty Rooms—Ten with private bath—Thirty with bath between each two rooms.  
Every Room has a Private Sleeping Porch.  
Located in the midst of beautiful Mountain Scenery.

Rates: \$18.50 to  
\$25.00 per week  
**NO EXTRAS**

DESCRIPTIVE BOOKLET AND FULL INFORMATION MAILED ON REQUEST

**THE MURPHEY SANATORIUM,**

W. T. MURPHEY, M. D.,  
MEDICAL DIRECTOR

MRS. HATTIE SOWER,  
SUP'T.

**Albuquerque, New Mexico**

DAVID A. SPEAR, M. D.  
BACTERIOLOGIST



## THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILL.

is devoid of the "institutional atmosphere."  
It is designed and conducted to meet the  
requirements of patients who demand



**Privacy and  
Individual Attention**

*Special consideration is given  
to Quality of Service*

Rates \$25.00 to \$35.00 per week

H. V. PETTIT, Supt.

OTTAWA

ILLINOIS



## Chicago Fresh Air Hospital

(FOR TUBERCULOSIS)

*At Rogers Park, Chicago, Illinois*

Patients received in *all* stages of Pulmonary Consumption.

Private Rooms and Board, \$25.00 per week.

Open Porch and two-bed Rooms, with Board, \$15.00.

**Tuberculin Treatment  
Artificial Pneumo-Thorax**

**DR. ETHAN A. GRAY,**

*Medical Superintendent.*

## THE POTTENGER SANATORIUM

MONROVIA, CALIFORNIA

**FOR DISEASES OF THE LUNGS AND THROAT**



A thoroughly equipped institution for the scientific treatment of tuberculosis. High class accommodations. Ideal all-year-round climate. Surrounded by orange groves and beautiful mountain scenery, 45 minutes from Los Angeles.

F. M. POTTENGER, A.M., M.D. LL.D.,  
Medical Director.

J. E. POTTENGER, A.B., M.D., Assistant  
Medical Director and Chief of Laboratory.

GEORGE H. EVANS, M.D. San Francisco,  
Medical Consultant.

**For Particulars, Address THE POTTENGER SANATORIUM, Monrovia, California**  
LOS ANGELES OFFICE, 1100-1101 TITLE INSURANCE BUILDING, FIFTH AND SPRING STREETS



## EDWARD SANATORIUM

For the Treatment of Incipient Pulmonary Tuberculosis  
NAPERVILLE, ILLINOIS



Established 1907. Attractive surroundings. Large grounds. Open-air sleeping cottages and infirmary with all appointments necessary for the comfort of the patients.

Modern hygienic-dietetic method of treatment. Medical and laboratory facilities. Resident physicians and trained nurses.

Tuberculin Treatment and Artificial Pneumothorax in suitable cases

*For detailed information, rates and rules of admission, apply to*

CHICAGO TUBERCULOSIS INSTITUTE, 8 South Dearborn Street, Room 1212, CHICAGO, ILL.



On Main Line Chicago, Milwaukee & St. Paul Railway  
30 Miles West of Milwaukee

## Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

For Nervous and Mild Mental Diseases

Building New, Most Approved Fireproof Construction

ARTHUR W. ROGERS, M.D., Resident Physician in Charge  
LONG DISTANCE TELEPHONE

Built and equipped to supply the demand of the neurasthenic, borderline and undisturbed mental case for a high class home free from contact with the palpable insane, and devoid of the institutional atmosphere. Forty-one acres of natural park in the heart of the famous Wisconsin Lake Resort Region. Rural environment, yet readily accessible. The new building has been designed to encompass every requirement of modern sanitarium construction, the comfort and welfare of the patient having been provided for in every respect. The bath department is unusually complete and up-to-date. Number of patients limited, assuring the personal attention of the resident physician in charge.

*Trains and at Oconomowoc on request.*

## The Norbury Sanatorium

JACKSONVILLE -:- ILLINOIS

Established by Dr. Frank P. Norbury, 1901

Incorporated and Licensed

“Maplewood” — “Maplecrest”

Capacity Forty Beds

**P**PRIVATE RESIDENTIAL HOMES for the treatment of Nervous and Mental Disorders. Especial attention given to the treatment, by approved modern methods, of the Psychoneuroses, Exhaustion states and selected Psychoses and addiction cases.

Dr. FRANK P. NORBURY,  
Medical Director. (Late  
Allonist, State Board of Ad-  
ministration. Formerly  
Supt. Kankakee State Hos-  
pital.)

DR. ALBERT H. DOLLEAR  
Superintendent (Late  
Clinical Asst., State Psycho-  
pathic Institute, Kankakee,  
Formerly Asst Supt., Water  
town State Hospital.)

Address all communications, THE NORBURY SANATORIUM, 806 South Daimond Street, JACKSONVILLE, ILLINOIS  
Springfield Office, DR. FRANK P. NORBURY, 407 South Seventh Street, by appointment

# Kenilworth Sanitarium

(Established 1905)



All correspondence should be addressed to Kenilworth Sanitarium, Kenilworth, Illinois

**KENILWORTH, ILLINOIS**  
(C. & N.-W. Railway. Six miles north of Chicago)

Built and equipped for the treatment of nervous and mental diseases. Approved diagnostic and therapeutic methods. An adequate night nursing service maintained. Sound proof rooms with forced ventilation. Elegant appointments. Bath rooms en suite, steam heating, electric lighting, electric elevator.

## Resident Medical Staff

Ella Blackburn, M. D., Sanger Brown, M. D., Sherman Brown, M. D.  
Chicago Office: 59 East Madison Street  
Telephone: Randolph 5794. Consultation by appointment only



Established 1867

# BELLEVUE SANITARIUM

BATAVIA, ILLINOIS  
near CHICAGO

*For Nervous and Mental Diseases  
of Women Only*

Restful, homelike and accessible. Treatment modern,  
scientific and ethical.

TERMS MODERATE.

WRITE FOR BOOKLET

**READER!** are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society

Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the "ad" in the JOURNAL.



BUILDING ABSOLUTELY FIRE-PROOF

# Waukesha Springs Sanitarium

FOR THE CARE AND TREATMENT OF  
**NERVOUS DISEASES**

BYRON M. CAPLES, M.D., Superintendent

Waukesha

::

Wisconsin



# NEURONHURST

Dr. W. B. Fletcher's Sanatorium



**For Treatment of Mental and Nervous Diseases, Including Legally Committed and Voluntary Cases**

Well equipped with all facilities for the care and treatment of all forms of mental and nervous diseases, inebriety, drug addiction and those requiring recuperation and rest. Gynecological department is in charge of skilled women physicians. All approved forms of Hydrotherapy, Balneotherapy, Massage, Swedish Movements, etc. All forms of Electrical Treatments. Phototherapy, High Frequency and X-Ray work. A strictly ethical institution. Correspondence with physicians invited. For particulars and terms, address:

**DR. MARY A. SPINK, Superintendent. Long Distance Telephones 1140 E. Market St., INDIANAPOLIS**

## DR. SIDNEY D. WILGUS

Retiring Superintendent of Kankakee State Hospital, also former Superintendent of Elgin State Hospital.

### Begs to Announce

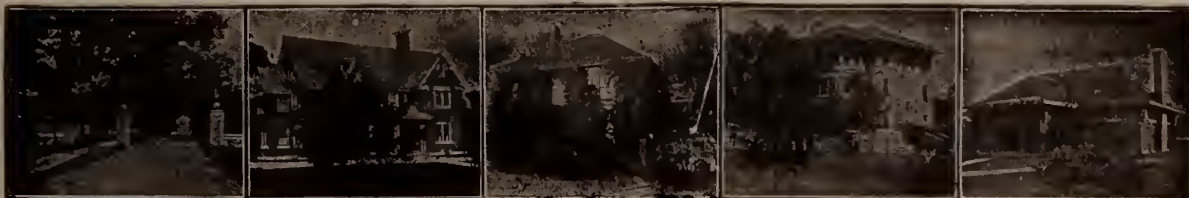
**that he has purchased a Sanitarium at Rockford, Ill. (The Ransom)**

and is prepared to give personal care and attention to mental and nervous cases and drug addictions. Modern features having been added, the equipment is qualified to give up-to-date treatment. Also tennis, croquet, boating, and other out-door exercises are prescribed. A nine-hole golf course is near by. Correspondence solicited, or, to save time, telephone: Long Distance, Rockford 3767, and reverse the charges. On request patients are met at any train with an automobile.

**Mail address, DR. SIDNEY D. WILGUS, Box 304, Rockford, Ill.**

**Chicago Office. Thursday Mornings until 12 at Suite 1603, 25 E. Washington St.**

**And by appointment**



ENTRANCE

WEST HOUSE

OFFICE AND BATH HOUSE

PSYCHOPATHIC HOSPITAL

GYMNASIUM

Established  
in 1884

## THE MILWAUKEE SANITARIUM

For Mental and Nervous Diseases

Wauwatosa,  
Wis.

Located at Wauwatosa (a suburb of Milwaukee) on C., M. & St. P. Ry., 2½ hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two lines street cars. Complete facilities and equipment as heretofore announced. ¶ Psychopathic Hospital: Continuous baths, fireproof building, separate grounds. ¶ West House: Rooms en suite with private baths. ¶ Gymnasium and Recreation Building: Physical culture, "Zander" machines, shower baths. ¶ Modern Bath House: Hydrotherapy, Electrotherapy, Mechanotherapy. ¶ 30 acres beautiful hill, forest and lawn. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

**RICHARD DEWEY, A. M., M. D.**

**EUGENE CHANEY, A. M., M. D.**

**WILLIAM T. KRADWELL, M. D.**

CHICAGO OFFICE: Marshall Field Annex, 25 E. Washington Street, Room 1823. Wednesdays 1 to 3 P. M. (except in July and August) Tel. Centra 1162  
MILWAUKEE OFFICE: Goldsmith Building, Room 604. Consultation by appointment. Tel. Main 81.  
TELEPHONE SANITARIUM OFFICE: Milwaukee-Wauwatosa 16.



## The Cincinnati Sanitarium For Mental and Nervous Diseases

Incorporated 1873

A strictly modern hospital fully equipped for the scientific treatment of nervous and mental affections. Situation retired and accessible. For details write for descriptive pamphlet.

F. W. Langdon, M.D., Medical Director

B. A. Williams, M. D., Resident Physician

Emerson A. North, M. D., Resident Physician

H. P. COLLINS, Business Manager, Box No. 4, College Hill, Cincinnati, Ohio



ABSOLUTELY FIREPROOF BUILDING

LESS THAN THREE HOURS FROM CHICAGO

## Mud Baths

For the treatment of RHEUMATISM, Nervousness, Kidney, Liver and Skin Diseases, and all ailments requiring elimination and relaxation. Location beautiful; climate healthful; 80 acres of private grounds.

DR. AUGUSTUS S. GILLES, Medical Director

*Correspondence with physicians solicited*

For rates, literature and reservations, address

**Waukesha Moor (Mud) Bath Co.**

WAUKESHA, WISCONSIN

## "BEVERLY FARM"

Home and School for Nervous and Backward Children

5 buildings, schools and gymnasium, 176 acres of land, 40 acres of timber, containing beautiful Camp Belle log cabin for recreation; separate buildings for boys and also children under 10 years of age. Thirty-six years experience. Consultations at home if desired. Publicity avoided. Address all communications to

**W. H. C. SMITH, M. D., Superintendent**

GODFREY, MADISON CO., ILLINOIS

*"Beverly Farm" was awarded Grand Prize by Committee of Awards of the Louisiana Purchase Exposition*

## The Peoria Mud Baths

We insist that your patients can eliminate as freely and as effectually in Illinois as in any other State in the Union.

Strict ethical relations. Thoroughly equipped. Have had thousands of patients.

DR. T. W. GILLESPIE, Medical Supt.

**SULPHUR SPRINGS SANITARIUM**

215-217 N. Adams St. Peoria, Illinois





# DR. WEIRICK'S SANITARIUM

FORMERLY DR. BROUGHTON'S SANITARIUM  
ESTABLISHED IN 1901

**For Opium, Morphine  
Cocaine and Other Drug  
Addictions, Including  
Alcohol and Special  
Nervous Cases**

Methods easy, regular, humane.  
Good heat, light, water, help, board,  
etc. Number limited to 44. A well  
kept home. Nervous-Mental De-  
partment in charge of Dr. W. L.  
Ransom. Address

**DR. G. A. WEIRICK**  
SUPERINTENDENT

**2007 South Main Street**

Phone 536  
**Rockford - - - Illinois**

**PETTEY & WALLACE**  
958 S. Fifth Street  
MEMPHIS, TENN.  
**SANITARIUM**



FOR THE TREATMENT  
OF

**Drug Addiction, Alcoholism,  
Mental and Nervous Diseases**

A quiet, home-like, private, high-  
class institution. Licensed. Strictly  
ethical. Complete equipment. Best  
accommodations.

Resident physician and trained  
nurses.

Drug patients treated by Dr.  
Petty's original method.

Detached building for mental  
patients.

# The Peoria Sanatorium

A private Sanatorium for the treatment of Nervous and Mental Diseases,  
by modern methods. Flowing Sulphur Spring. Licensed by the State.

**DRUG AND LIQUOR HABITS TREATED**

WRITE FOR BOOKLET

**Director, DR. GEO. W. MICHELL**

**PHONE MAIN 225.**

**Address, 106 N. Glen Oak, PEORIA, ILL.**

Lawrence County  
E. M. Coolcy, Pres.....Lawrenceville  
F. F. Petty, Secy.....Lawrenceville

Lee County  
Chas. C. Kost, Pres.....Dixon  
C. G. Poole, Secy.....Compton

Livingston County  
E. G. Beatty, Pres.....Pontiac  
John Ross, Secy.....Pontiac

Logan County  
W. W. Coleman, Pres.....Lincoln  
H. S. Oyler, Secy.....Lincoln

McDonough County  
E. R. Miner, Pres.....Macomb  
Geo. S. Duntley, Secy.....Bushnell

McHenry County  
N. L. Seelye, Pres.....Harvard  
Hyde West, Secy.....Woodstock

McLean County  
Frank C. Fisher, Pres.....Bloomington  
Thos. D. Cantrell, Secy.....Bloomington

Macon County  
F. J. Mittan, Pres.....Decatur  
C. E. Hildreth, Secy.....Decatur

Macoupin County  
G. E. Hill, Pres.....Girard  
T. D. Doan, Secy.....Scottville

Madison County  
J. Barnard Hastings.....Alton  
E. W. Fiegenbaum, Secy.....Edwardsville

Marion County  
W. W. Murfin, Pres.....Patoka  
J. M. Gambil, Secy.....Centralia

Marshall-Putnam County  
R. R. Eddington, Pres.....Lacon  
R. L. Eddington, Secy.....Lacon

Mason County  
H. O. Rogier, Pres.....Mason City  
W. R. Grant, Secy.....Easton

Massac County  
J. A. Orr, Pres.....Metropolis  
J. A. Helm, Secy.....Metropolis

Menard County  
H. E. Wilkins, Pres.....Petersburg  
H. P. Moulton, Secy.....Petersburg

Mercer County  
C. M. Murrell, Pres.....Mathersville  
A. N. Mackey, Secy.....Aledo

Monroe County  
S. Kohlenbach, Pres.....Columbia  
L. Adelsberger, Secy.....Waterloo

Montgomery County  
C. H. Lockhart, Pres.....Witt  
G. W. Cox, Secy.....Litchfield

Morgan County  
G. R. Bradley, Pres.....Jacksonville  
W. L. Frank, Secy.....Jacksonville

Moultrie County  
C. W. Taylor, Pres.....Bethany  
O. M. Williamson, Secy.....Sullivan

Ogle County  
A. H. Beebe, Pres.....Stillman Valley  
J. T. Kretsinger, Secy.....Leaf River

Peoria City Medical Society  
O. B. Will, Pres.....Peoria  
Hugh Cooper, Secy.-Treas.....Peoria

Perry County  
J. S. Templeton, Pres.....Pickneyville  
T. B. Kelley, Secy.....Du Quoin

Piatt County  
J. G. Lamb, Pres.....Cerro Gordo  
St. Clair Vance, Secy.....Bement

Pike County  
J. R. Pollock, Pres.....Nebo  
W. E. Shastid, Secy.-Treas.....Pittsfield

Pope County  
J. A. Fisher, Pres.....Brownsfield  
L. S. Barger, Secy.....Golconda

Pulaski County  
L. F. Robinson, Pres.....Ullin  
W. R. Wesenberg, Secy.....Mound City

Randolph County  
A. E. Fritzè, Pres.....Chester  
John P. Grimes, Secy.-Treas.....Menard

Richland County  
A. T. Telford, Pres.....Olney  
E. H. Horner, Secy.....Olney

Rock Island County  
H. A. Beam.....Moline  
H. J. Love, Secy.....East Moline

St. Clair County  
J. H. Fulgham, Pres.....East St. Louis  
A. E. Hansing, Secy.....Belleville

Saline County  
M. D. Empson, Pres.....Galatia  
W. J. Blackard, Secy.....Harrisburg

Sangamon County  
Elmer E. Hagler, Pres.....Springfield  
Henry A. Aschauer, Secy.....Springfield

Schuyler County  
A. W. Ball, Pres.....Rushville  
J. S. Steiner, Secy.....Rushville

Scott County  
J. W. Eckman, Pres.....Winchester  
H. H. Fletcher, Secy.....Winchester

Shelby County  
F. A. Martin, Pres.....Tower Hill  
Frank P. Auld, Secy.....Shelbyville

Stark County  
James R. Holgate, Pres.....Wyoming  
Clyde Berfield, Secy.....Toulon

Stephenson County  
N. C. Phillips, Pres.....Freeport  
D. G. Smith, Secy.....Freeport

Tazewell County  
H. L. Yoder.....Morton  
F. C. Gale, Secy.....Pekin

Union County  
S. G. Martin, Pres.....Anna  
E. V. Hale, Secy.....Anna

Vermilion County  
J. B. Morton, Pres.....Ridge Farm  
Solomon Jones, Secy.....Danville

Wabash County  
P. G. Manley, Pres.....Mt. Carmel  
A. A. Aukenbrandt, Secy.....Mt. Carmel

Warren County  
Philo B. Conant, Pres.....Roseville  
H. M. Camp, Secy.....Monmouth

Washington County  
R. Jack, Pres.....Okawville  
H. Schmidt, Secy.....Addieville

Wayne County  
T. J. Hilliard, Pres.....Fairfield  
Ostella F. Blakely, Secy.....Fairfield

White County  
C. B. Staley, Pres.....Enfield  
John Niess, Secy.....Carmi

Whiteside County  
W. H. Durkee, Pres.....Fulton  
H. N. Schmaling, Secy.....Fulton

Will County  
Marion K. Bowles, Pres.....Joliet  
L. J. Lennon, Secy.....Joliet

Williamson County  
J. G. Parmley, Pres.....Marion  
H. A. Felts, Secy.....Marion

Winnebago County  
Wm. E. Park, Pres.....Rockford  
C. M. Ranseen, Secy.-Treas.....Rockford

Woodford County  
W. D. Madison, Pres.....Roanoke  
H. A. Millard, Secy.....Minonk



## *Join the Anti-Fly Crusade*



Cover the Garbage Pail

Empty Manure Boxes Weekly

To Hell With the Fly!

## AREND-ADAMICK DOUBLE KUMYSS

**AN IDEAL FOOD** for all conditions of enfeebled digestive power from any cause, malnutrition in infants or the aged—a sustaining diet during the course of acute infectious diseases and gastro-intestinal disorders  
**EASILY ASSIMILATED** and contains the elements essential for the nourishment of the organism.  
**A VALUABLE NUTRIENT** in Typhoid, Enteritis, Marasmus, Acute fevers, Gastric Ulcer, Anemia, Vomiting of Pregnancy, Asthenic fevers and during Convalescence.

Its taste is pleasantly acidulous—its enticing flavor is unusually acceptable to the capricious appetite of the sick—it may be used for days as an exclusive diet.

Booklet giving instructions and interesting clinical report, also price list, free on request.

**A. AREND DRUG COMPANY**

Manufacturing Chemists

182 West Madison Street, Chicago

## *You do not need a special syringe*

or an extra-calibred needle to use our aseptic, ampuled, sterilized solutions. Mercury salicylate, for example—and a noteworthy example, too—for this is usually a dense product that will not flow through the regular hypodermic needle.

Your regular syringe and needle will be all you need when you use our ampules—at once a convenience and an economy which every medical man will appreciate in these days of war-time stress.

May we send you a list of our Ampules?

**SHARP & DOHME**  
**BALTIMORE**

Hypodermic Specialists Since 1882

## *READER!*

are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society. Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the "ad" in the JOURNAL.

## **WILSTA EYE GLASS MOUNTINGS**

Manufactured Exclusively for

**THE WHITE-HAINES OPTICAL CO.**

The WILSTA mounting is the best fingerpiece mounting on the market. Gives perfect satisfaction, holds the lens perfectly and just where you want them.

Send your R<sub>x</sub> work to THE WHITE-HAINES OPTICAL CO., where it will have the attention of the best skilled lens grinders in the country.

**THE WHITE-HAINES OPTICAL CO.**

Columbus, Ohio.

Indianapolis, Ind.

Springfield, Ill.



# Chicago College of Medicine and Surgery

**MEDICAL  
DEPARTMENT OF  
VALPARAISO  
UNIVERSITY**



**Main College Building and Willard Hospital**

**702-706  
SO. LINCOLN ST.  
CHICAGO, ILL.**

This College has an enrollment of 500 students. The Laboratory and Hospital facilities are abundant.

The Faculty consists of men who have distinguished themselves as medical educators.

The College is not burdened with debts and is therefore able to expend all of its income upon the courses of instruction.

The Calendar year is divided into three semesters of four months each. The Fall semester begins on the last Tuesday in September. The Winter semester begins on the first Monday in February. The Summer semester begins on the first Monday in May.

*For catalogue or further information address*

**J. NEWTON ROE, Secretary**

**706 S. Lincoln St., Chicago, Ill.**

## Chicago Eye, Ear, Nose and Throat College

**A Post-Graduate School for Prac-  
titioners of Medicine**

**235 W. Washington Street  
Chicago, Ill.**

**Catalogue on Application**

## Chicago Maternity Hospital and Training School for Nurses

**ACCOMMODATES 25 PATIENTS  
RATES: \$10.00 to \$25.00 PER WEEK**

Well infants cared for in nursery for \$5.00 per week.  
Training School for Obstetrical and Infants' nurses.

Address

**EFFA V. DAVIS, M.D., 2314 N. Clark St., Chicago**

## Home Training In Nursing



We offer a thorough extension course to beginners and also to practical nurses wishing to perfect themselves in the theory and science of nursing.

There is in every community a demand for competent nurses — women physically qualified and possessing natural ability, who for various reasons cannot leave home to get their training. Through the aid of the very thorough system of instruction used by this school for a period of sixteen years, we have trained hundreds of women who have "made good" as practical nurses. In fact our graduates adapt themselves to the inconveniences of private nursing more readily than the hospital-trained nurse. They are loyal to the home doctor, whose co-operation has made their success possible.

Reputable physicians are invited to investigate our methods and co-operate with us by sending the names of earnest women who in their estimation would make desirable applicants.

Tuition fees very reasonable—small payment plan. Write for the Sixteenth Annual Announcement. Address

**Karen Esmann, Registrar  
CHICAGO SCHOOL OF NURSING  
116 S. Michigan Blvd., Chicago, Ill.**

# Loyola University

## School of Medicine

BENNETT MEDICAL COLLEGE

**O**FFERS a Five Year Course in Modern Scientific Medicine leading to the M. D. Degree, and a Six Year Course leading to the B. Sc. M. D. Degree. ¶Individual instructions in large well equipped laboratories, and in fifteen metropolitan hospitals and dispensaries. ¶Internships available for all graduates. ¶Many opportunities in city for self help.

---

WRITE FOR CATALOGUE, HOSPITAL FOLDER  
AND "SELF-HELP FACTS"

1360 West Fulton Street

CHICAGO

## *READER!*

are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society.

Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the "ad" in the JOURNAL.



# INDEX TO ADVERTISERS

Abbott Laboratories.....	7
A. Arend Drug Co.....	27
Bayer Company.....	8
Bellevue Sanitarium.....	22
Beverly Farm School.....	24
Carnrick, G. W., Co.....	15
Chicago College of Medicine and Surgery.....	29
Chicago Eye, Nose & Throat College.....	29
Chicago Fresh Air Hospital.....	20
Chicago Laboratory.....	14
Chicago Maternity Hospital.....	29
Chicago Pasteur Institute.....	9
Chicago School of Nursing.....	29
Cincinnati Sanitarium.....	24
College of Medicine, Univ. of Ill.....	11, 30
Columbus Medical Laboratory.....	12
Crittenton, Chas. N., Co.....	22
Edward Sanatorium.....	21
Fellows Medical Mfg. Co.....	19
Fletcher's Sanatorium.....	23
Gradwohl Biological Laboratories.....	12
Horlick's Malted Milk Co.....	2
Illinois Nurses Registry.....	26
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Laboratory of Pathology and Bacteriology.....	2
Lambert Pharmaceutical Company.....	13
Lederle Antitoxin Laboratory.....	35
Loyola University School of Medicine.....	11, 30
McIntosh, John, Co.....	34
Medical Protective Co.....	11
Mead, Johnson & Co.....	4
Mellier Drug Co.....	17
Mennen.....	17
Mellin's Food Co.....	6

Milwaukee Sanitarium.....	23
McLain Orthopedic Sanitarium.....	22
Mueller & Co., V.....	30
Murphey Sanatorium.....	19
Nelson, Baker & Co.....	27
Norbury Sanitarium.....	21
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Parke, Davis & Co.....	18
Pennoyer Sanitarium.....	6
Peoria Mud Baths.....	24
Peoria Sanatorium.....	25
Petty & Wallace's Sanitarium.....	25
Phillips Co., Chas. H.....	32
Physicians' Radium Association.....	13
Pine Sanatorium.....	34
Pitman-Moore Co.....	4
Pottenger Sanatorium.....	20
Purdue, Frederick, Co.....	8
Pure Gluten Food Co.....	5
Quaker Oats Co.....	5, 33
Radium Institute.....	36
Ransom Sanitarium.....	23
Saunders Co., W. B.....	front cover
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Sherman, G. H., M. D.....	6
Standard Laboratories.....	7
Standard Oil Co.....	3
Storm, Katherine L., M. D.....	11
Swan-Myers Co.....	9
Tilden Co., The.....	6
Victor Electric Co.....	16
Wander, Dr. A.....	24
Waukesha Moor (Mud) Bath Co.....	22
Waukesha Springs Sanitarium.....	25
Weirick's Sanitarium.....	28
White-Haines Optical Co.....	28

## BUYER'S INDEX

### ABDOMINAL SUPPORTERS

Storm, Katherine L., M. D.....	11
--------------------------------	----

### AUTOMOBILES, ETC.

Standard Oil Co.....	3
----------------------	---

### FOOD

Arend-Adamick Koumyss.....	27
Horlick's Malted Milk Co.....	2
Mead, Johnson & Co.....	6
Mellin's Food Co.....	6
Pure Gluten Food Co.....	5
Quaker Oats.....	5, 33
Wander's Ovaltine.....	16

### HOSPITAL

Chicago Fresh Air Hospital.....	20
Chicago Maternity Hospital.....	29

### INVESTMENTS AND INSURANCE

Medical Protective Co.....	11
----------------------------	----

### LABORATORY

Abbott Laboratories.....	7
Chicago Laboratory.....	14
Columbus Medical Laboratory.....	12
Gradwohl Biological Laboratories.....	12
Laboratory of Pathology and Bacteriology.....	2
Standard Laboratories.....	7
Swan-Myers Co.....	16

### MEDICAL BOOK PUBLISHERS

Saunders Co., W. B.....	front cover
-------------------------	-------------

### MEDICAL SCHOOLS

Chicago College of Medicine and Surgery.....	29
Chicago Eye, Ear, Nose and Throat College.....	29
College of Medicine, Univ. of Ill.....	11, 30
Loyola University School of Medicine.....	11, 30

### MUD BATHS

Peoria Mud Baths.....	24
Waukesha Moor (Mud) Bath Co.....	24

### NURSES

Chicago School of Nursing.....	29
Illinois Nurses Registry.....	26

### PHARMACEUTICALS

Abbott Laboratories.....	7
Bayer Company.....	8
Carnrick, G. W., Co.....	15
Crittenton, Chas. N., Co.....	22
Fellows Medical Mfg. Co.....	19
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Lederle Antitoxin Laboratory.....	35
Lambert Pharmacal Company.....	13
Mead, Johnson & Co.....	4
Mellier Drug Co.....	17
Mennen.....	17
Nelson, Baker & Co.....	27
Parke, Davis & Co.....	18
Phillips Co., Chas. H.....	32
Pitman-Moore Co.....	4
Purdue, Frederick, Co.....	8
Sherman's Bacterins.....	5
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Swan-Myers Co.....	9
Tilden Co., The.....	6

### SANATORIA & SANITARIA

Bellevue Sanitarium.....	22
Cincinnati Sanitarium.....	24
Edward Sanatorium.....	21
Fletcher's Sanatorium.....	23
Kenilworth Sanitarium.....	22
Norbury Sanitarium.....	21
McLain Orthopedic Sanitarium.....	22
Milwaukee Sanitarium.....	23
Murphey Sanatorium.....	19
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Pennoyer Sanitarium.....	6
Peoria Sanitarium.....	25
Petty & Wallace's Sanitarium.....	25
Pine Sanatorium.....	34
Pottenger Sanatorium.....	20
Radium Institute.....	36
Ransom Sanitarium.....	23
Waukesha Springs Sanitarium.....	22
Weirick's Sanitarium.....	25

### SURGICAL INSTRUMENTS

McIntosh, John, Co.....	34
Mueller & Co., V.....	30
Victor Electric Co.....	28

IN PLACE OF OTHER ALKALIES USE

# Phillips' Milk of Magnesia

"THE PERFECT ANTACID"

For Correcting Hyperacid Conditions—Local or Systemic. Vehicle for Salicylates, Iodides, Balsams, Etc.

Of Advantage in Neutralizing the Acid of Cows' Milk for Infant and Invalid feeding.

## Phillips' Phospho-Muriate of Quinine Compound NON-ALCOHOLIC TONIC AND RECONSTRUCTIVE

With Marked Beneficial Action Upon the Nervous System. To be relied Upon Where a Deficiency of the Phosphates is Evident.

THE CHAS. H. PHILLIPS CHEMICAL CO.  
NEW YORK LONDON

### DON'T FORGET

to patronize our advertisers, and to mention the fact that you saw their advertisement in the

ILLINOIS MEDICAL JOURNAL.

### DO YOU KNOW OF ANY CONTESTED

insurance claims? Our bureau renders its clients expert service in securing policyholders and beneficiaries holding health and accident policies satisfactory adjustment of disputed claims. Our work is conducted through the medical profession. Complete details regarding our system sent upon request to Dr. W. E. Magruder, Med. Dir., Nat. Investigation Bureau, 924 Madison Ave., Baltimore, Md. KK

### CONTENTS—Continued

#### EDITORIAL.

Medical Officers Wanted in the Army.....	30
Changes in By-Laws.....	30
Tuberculosis and War.....	30
Rush Alumni.....	31

#### CORRESPONDENCE.

Health Insurance.....	32
Surgical Instruments.....	33
The Bloomington Meeting.....	33
Indemnity Insurance.....	33
Optometry Act Void.....	34

#### PUBLIC HEALTH.

New Medical and Sanitary Laws.....	34
New Department of Registration and Education.....	35
War-Time Tuberculosis Program.....	36

Military Exemption Board.....	36
Illinois State Medical Society:	
Official Minutes of Annual Meeting.....	41
Auditor's Report.....	62

#### SOCIETY PROCEEDINGS.

Cook County:	
Chicago Medical Society.....	62
Chicago Ophthalmological Society.....	64
Chicago Laryngological and Otological Society.....	66
Greene County.....	69
Iroquois-Ford County.....	70
Madison County.....	71
St. Clair County.....	71
Woodford County.....	71
Personals.....	71
News Notes.....	72
Marriages.....	74
Deaths.....	74
Book Notices.....	75



DID YOU KNOW THAT

A good water supply in the spring may save an undertaker's bill in the fall?

It's the spring fly which makes the summer pest?

A mosquito breeding pool may mean malaria later on?

Spring gardening has lengthened many lives?

Fresh air is the best tonic?

Today is the best time to begin to build for health?

I AM SORRY I  
did NOT advertise

—in the—

ILLINOIS  
MEDICAL  
JOURNAL



Doctors!

If you see the "adv."  
in the Journal the  
advertiser is reliable.

Buy from our  
Advertisers

and make your Jour-  
nal the best paying  
as well as the best  
reading Journal.

## Some Oats

Are puny, starved,  
insipid. So we discard  
them in making Quaker  
Oats.

## Some Oats

Are big and plump—  
rich in that wondrous  
flavor Nature gives to oats.

We use these queen  
grains only in making  
Quaker Oats. And we get  
but ten pounds from a  
bushel.

That is why Quaker  
Oats rule the world over.  
In a hundred nations folks  
consume a billion dishes  
yearly.

And that is why folks  
should be sure to get them.  
They cost no extra price.

10c and 25c Per Package

*Except in Distant Sections*

Quaker  
Oats

*The Flavery Flakes*

## PERSONAL SERVICE

*For Owners and Prospective  
Buyers of*

## X-Ray Equipment

The special attention of all users of Electro-Medical Apparatus is directed to the John McIntosh Company, of Chicago, Milwaukee and St. Louis.

### Service

By service, we mean that any user of apparatus presented by the VICTOR ELECTRIC CORPORATION is entitled to the service of the John McIntosh Company.

Our lines cover everything in Electro-Medical Apparatus for the Physician, for the Hospital, and for the X-Ray Laboratory. If you are in need of information or service, write to the point nearest you.

At these offices you will be able to secure, in addition to Electro-Medical Apparatus, all classes of supplies used in X-Ray Laboratories, such as plates, developing materials, etc.

### JOHN McINTOSH COMPANY

30 E. Randolph Street  
CHICAGO

Marina Bldg., 306 N. Grand Ave. Merchants & Mfg's Bank Bldg.  
ST. LOUIS MILWAUKEE

## WANTED, FOR SALE, AND RENT DEPARTMENT

Advertisements under this heading cost one dollar for four lines or less, and 25 cents for each additional line, each insertion. Payable in advance. Line holds eight ordinary words.

DRUG AND LIQUOR HABITS CURED. No suffering or danger. New treatment without delirium. Absolutely satisfactory results. Modern Sanitarium, established eighteen years. Close personal attention. RALPH SANITARIUM, 529 Highland Ave., Kansas City, Mo.

## READERS!

Are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society.

Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the "ad" in the JOURNAL.

## Drug and Alcoholic Addictions Treated Exclusively

Our facilities for caring for this class of patients are unsurpassed. This sanitarium is conducted along high-grade ethical lines.

Fixed charge made to patient when accepted for treatment. No extras. Time required: Alcoholism, 3-7 days; Drug Addiction, 10-20 days. No Suffering. Booklet covering both subjects sent free on request.

## The Pine Sanitarium

Established 1900

1919 Prairie Ave., Chicago, Illinois  
Local and Long Distance Telephone, Calumet 4543

Resident Physician  
James H. Appleman, M. D.  
CONSULTANTS

Surgeon  
Gustav M. Blech, M. D.  
25 East Washington St.

Genito-Urinary  
Frank Wieland, M. D.  
122 South Michigan Ave.

Internist  
Walter B. Metcalf, M. D.  
25 East Washington St.

Electro-Therapy  
Emil H. Grubbe, M. D.  
130 North State Street  
Throat, Nose and Ear

Richard H. Street, M. D.  
25 East Washington St.

Pathologist  
W. Henry Wilson, M. D.  
3129 Rhodes Ave.

Oculist  
Carleton A. Harkness, M. D.  
29 East Madison St.



# LEDERLE'S POLLEN VACCINE

In the Prophylaxis and Treatment of

## HAY-FEVER

In 1915, LEDERLE'S POLLEN VACCINE was used by over 600 physicians for the prophylaxis and treatment of hay-fever. A clinical history blank was submitted to each physician and the results of the collected data are as follows:

1. Favorable results followed as a *prophylactic* against hay-fever in 83 *per cent* of the cases.
2. In the *treatment* of hay-fever favorable results followed in 89 *per cent* of the cases.
3. Marked asthmatic symptoms were associated with 55 *per cent* of the cases. The symptoms were relieved in 84.2 *per cent* of these cases.

During 1916, LEDERLE'S POLLEN VACCINE was employed by over 1,500 physicians with the following results:

1. Favorable results followed as a *prophylactic* in 80 *per cent* of the cases.
2. In the *treatment* of hay-fever favorable results were obtained in 91.7 *per cent* of the cases.
3. Marked asthmatic symptoms were associated with 53 *per cent* of the cases. These symptoms were successfully relieved in 78.5 *per cent* of the cases.

LEDERLE'S POLLEN VACCINE was used with favorable results in 40 states of the Union, from Maine to California, and as far away as Porto Rico.

The above results in the prophylaxis of hay-fever are based on the use of LEDERLE'S POLLEN VACCINE according to our original recommendation of 15 doses for the complete treatment.

*Literature will be sent to any physician upon request*

**LEDERLE ANTITOXIN LABORATORIES**  
**SCHIEFFELIN & CO., Distributors** **NEW YORK**

# THE RADIUM INSTITUTE

1604 Mallers Bldg., 59 East Madison Street  
Corner Wabash Avenue, Telephone Randolph 5794

## CHICAGO

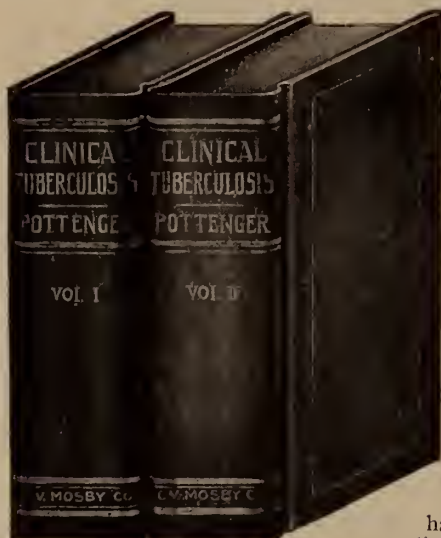
DR. FRANK E. SIMPSON, Director

**T**REATMENT of Malignant and Benign Growths with Radium, Post-Operative Prophylactic Radiations. Applicators for all purposes, including many of Special design. We desire to confer and cooperate with surgeons who wish to use Radium in inoperable cases.

A complimentary copy of *The Radium Quarterly* will be sent on request.

### COUNCIL

DR. F. A. BESLEY	DR. E. C. DUDLEY
DR. A. R. EDWARDS	DR. O. T. FREER
DR. M. HERZOG	DR. L. E. SCHMIDT
DR. G. F. SUKER	



## CLINICAL TUBERCULOSIS

PATHOLOGICAL ANATOMY, PATHOLOGICAL PHYSIOLOGY, DIAGNOSIS, PROGNOSIS, COMPLICATIONS AND TREATMENT

By FRANCIS M. POTTENGER, A. M., M. D., LL. D.

Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Professor of Diseases of the Chest, College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, California.

In two volumes of 1,400 pages, with original engravings, including photographs, line drawings, charts, color plates, etc. Sold only in sets. Price, per volume, \$6.00.

### A Monumental Work on Tuberculosis

This is not only a book for specialists on tuberculosis, but is a practical treatise on diagnosis of the chest and in fact a study of the human being who happens to have tuberculosis. It contains a broad discussion of the principles of internal medicine.

The first few chapters dealing with infections, their relation to childhood and childhood tuberculosis, particularly when one takes into consideration that all the methods of treatment are discussed from their physiological action, telling the physician what each will do and will not do, should make it worth while to all pediatricians.

The chapter on laboratory methods is an advance on all things written and should make it necessary that this be in the hands of all people who are trying to do accurate diagnostic work in tuberculosis. It is not a book alone for specialists in tuberculosis, but should be in the hands of general men because of its being on general medicine. *Sign the attached coupon and mail today.*

**C. V. MOSBY CO.—Medical Publishers—ST. LOUIS**

 **Send for Complete Catalog of Medical Publications**

III.  
Med. Jour.

C. V. MOSBY  
COMPANY  
St. Louis.

Gentlemen: Please send me one set (2 vols.) Pottenger's "Clinical Tuberculosis," for which I enclose my check for \$12.00, or you may charge to my account.

Name .....

Street .....

Town..... State.....

Mention ILLINOIS MEDICAL JOURNAL when writing to advertisers



# Illinois Medical Journal

OFFICE OF PUBLICATION 3338 OGDEN AVENUE, CHICAGO

Vol. XXXII, No. 2

CHICAGO, AUGUST, 1917

\$2.00 a Year

## CONTENTS

### ORIGINAL ARTICLES

	PAGE		PAGE
The More Common Surgical Emergencies in the Urogenital Tract and their Management. <i>F. Kreissl, M. D., Chicago</i> .....	77	Timeliness in the Application of Radium. <i>Albert Woelfel, M. D., Chicago</i> .....	97
Specificity and Non-Specificity of Vaccines. <i>David J. Davis, M. D., Chicago</i> .....	84	Roentgen Diagnosis of Luetic Lesions. <i>Edw. S. Blaine, M. D., Chicago</i> .....	100
Vaccines for Prophylaxis. <i>Gustav F. Ruediger, M. D., La Salle, Ill.</i> .....	87	Fractures of the Pelvis and Resulting Injuries to the Urethra and Bladder. <i>H. C. Mitchell, M. D., Carbondale, Ill.</i> .....	104
Vaccine Therapy in Typhoid Fever. <i>S. R. Slaymaker, M. D., Chicago</i> .....	92	Operation for Cystocele by the Abdominal Route. <i>W. L. Gray, M. D., Champaign, Ill.</i> .....	108
Vaccines in Pertussis. <i>Henry W. Cheney, M. D., Chicago</i> .....	94	Role of the Prostate in Acute Gonorrheal Infections. <i>Ben D. Baird, M. D., Galesburg, Ill.</i> .....	109

(Continued on page 32)

Entered as Second-Class Matter August 28, 1913, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879.

## Strouse and Perry's Food for the Sick JUST OUT

This work translates the terms of the laboratory into the terms of the kitchen. It gives definite directions for carrying out the physician's instructions and converts the patient from a blind follower of the physician to his intelligent assistant. Diets are given for diabetes (starvation treatment), gout, nephritis, high blood-pressure, kidney stone, diseases of the stomach, intestines, liver, gall-stones, tuberculosis, fevers, skin affections, obesity, anemia, etc. There are in all 232 diets and menus, and 124 special recipes.

12mo of 270 pages. By SOLOMON STROUSE, M.D., Professor of Medicine, Post-Graduate Medical School, Chicago; and MAUDE A. PERRY, B.S., Dietitian at Michael Reese Hospital.

## Abt's The Baby's Food JUST OUT

This is a practical guide for infant feeding, telling young mothers, nurses, and caretakers what foods to use with minute directions for their preparation. You get weights and measures; the mineral constituents and caloric values of foods. Then come recipes for acid beverages of all kinds, and their use; albuminous beverages, starchy beverages; milk preparations of every variety; soups and broths; puddings and cereal preparations; custards; eggs and principles in their preparation; vegetables; fruits, meats; sea foods; and bread of every kind that has value in infant feeding.

12mo of 143 pages. By ISAAC A. ABT, M.D., Professor of Diseases of Children, Northwestern University Medical School. Cloth, \$1.25 net.

W. B. SAUNDERS COMPANY

Philadelphia and London

This Issue, 6,650 Copies

# Horlick's the Original Malted Milk

This is the package. Others are substitutes.



Palatable, agreeable and beneficial to infant, invalid and convalescent.

## Horlick's Malted Milk Co., Racine, Wis.

## CLINICAL LABORATORY ANALYSES

For your own reputation and the health of your patients **Absolute Accuracy** in laboratory analyses are prerequisites.

**Quick Service** must accompany such work.

**We Have Built Our Reputation and a Big Business on These  
Ask Your Fellow Practitioners**

Accurate analyses of all secretions, excretions and body fluids

### Wassermann Test-Tissue Diagnoses-Autogenous Vaccines

### LABORATORY OF PATHOLOGY AND BACTERIOLOGY

Dr. Maximilian Herzog

Dr. Meyer D. Moledetzky

The Eleventh (11th) Floor

**Marshall Field & CO. Annex Building**

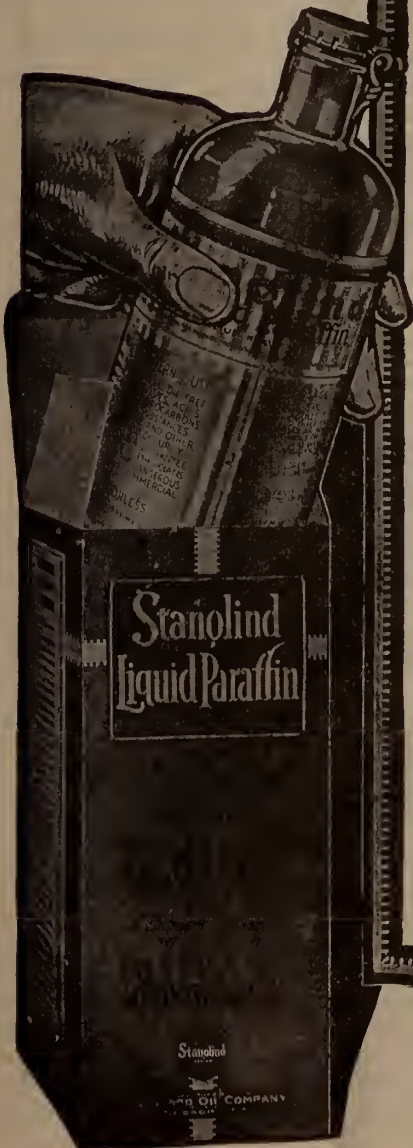
Suite 1130—25 E. Washington St.

**CHICAGO**

Two Telephones: Randolph 6552-6553



**Stanolind**  
Trade Mark Reg. U. S. Pat. Off.  
**Liquid Paraffin**  
 (Medium Heavy)  
 Tasteless—Odorless—Colorless



# Before Operation

Stanolind Liquid Paraffin is an ideal laxative for surgical practice.

When used in the proper dose, it thoroughly empties the alimentary canal, without producing irritation or other undesirable effects.

It is particularly valuable in intestinal surgery, because it leaves the stomach and bowels in a quiet state, and because its use is not followed by an increased tendency to constipation.

After an abdominal operation, one or two ounces of Stanolind Liquid Paraffin may be given through a tube while the patient is still under the anaesthetic, or as an emulsion, an hour or two later.

Stanolind Liquid Paraffin is essentially *bland* in its action, causing a minimum amount of irritation while in stomach or intestine. It may also in most cases be gradually reduced without apparently affecting the frequency of the evacuations.

A trial quantity with informative booklet will be sent on request.

**Standard Oil Company**

(Indiana)

72 W. Adams St.  
 Chicago, U. S. A.

## *An Efficient Sugar for Infant Feeding*

means maximum tolerance, assimilability, and gain in weight with minimum digestive disturbances and diarrhoea for the infant. This is why nearly every pediatricist prescribes

# MEAD'S DEXTRI-MALTOSE

(MALT SUGAR)

**in feeding formulae for infants' diet**

Let us send you samples and literature fully describing the simplicity of using Mead's Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

**MEAD JOHNSON & CO., EVANSVILLE, IND.**

There are many grades of crude drugs offered for sale on the drug market

*But—*

There is only one "best"

It takes the best grade of crude drug, the highest grade of workmanship, together with the most accurate and "time-tried" methods to make



**PITMAN-MOORE COMPANY, Chemists**  
INDIANAPOLIS, INDIANA



# HOYT'S GUM GLUTEN BAKED PRODUCTS DAINTY FLUFFS AND BISCUIT CRISPS

A summer substitute for  
Gluten bread. Easy to  
carry when away on trips  
or vacation.

For sale by agents every-  
where. Send for samples.

— THE —

**PURE GLUTEN FOOD CO.**

90 W. Broadway  
NEW YORK CITY



## 25% Bran In a Delightful Breakfast Dainty

The bran in Pettijohn's is  
flake bran—the most efficient  
form.

It is hidden in soft rolled  
wheat, which everybody likes.

These flavory flakes have,  
for decades, formed a favorite  
morning dish. Now we make  
it extra-rich in bran, to meet  
a wide requirement.

You will find, we think, no  
other bran food so adapted to  
continuous use. The bran is  
not conspicuous. And rolled  
wheat is something of which  
nobody tires.

# Pettijohn's

*Rolled Wheat—25% Bran*

A breakfast dainty whose flavory flakes  
hide 25 per cent unground bran.

**Pettijohn's Flour**—75 per cent fine  
patent flour with 25 per cent bran flakes.  
Use like Graham flour in any recipe.

Both sold in packages only.

(1651)

# Hay Fever

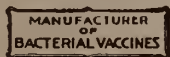
Successfully Treated with

## BACTERIAL VACCINES

Pollen irritation and breathing of the hot  
dust laden atmosphere favor the develop-  
ment of pyogenic bacteria in the respiratory  
tract which then becomes a primary factor of  
the disease.

Experience shows that the immunizing in-  
fluence of an appropriate bacterin will either  
cure the disease or so modify it that it causes  
but little distress. Use Sherman's No. 40.

Write for Literature.



**G. H. SHERMAN, M.D.**  
*Detroit, Mich.*  
*U.S.A.*

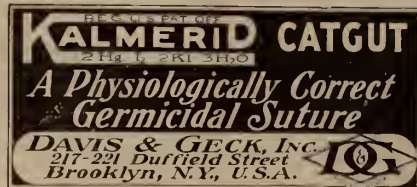
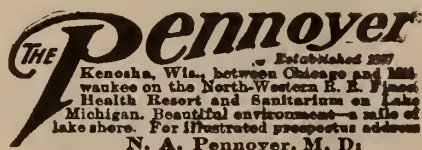
# RESPIRAZONE The Physician's First Thought in Hay Fever and Asthma

Samples to the Profession upon application

**THE TILDEN COMPANY** MANUFACTURING PHARMACISTS AND CHEMISTS

NEW LEBANON, N. Y.

ST. LOUIS, MO.



**DOCTOR:** It is our purpose to give to you on your orders, the best pharmaceuticals that the highest grade of crude drugs, pure chemicals and skilled workmanship, under experienced supervision, can produce.

When our man calls upon you, give him a few moments of your time. He will tell you more about what we are trying to do.

**G. D. SEARLE & CO.** Mfrs. of Fine Pharmaceuticals and Hypodermic Tablets  
215-217-219 W. Ohio St. CHICAGO Telephone North 1704

**Mellin's Food** is successfully used  
in

**Summer Diarrhea** for it furnishes

immediately available nutrition well suited

to spare the body-protein.

to prevent a rapid loss of weight.

to resist the activity of putrefactive bacteria.

to favor a retention of fluids and salts in the  
body tissues.

**MELLIN'S FOOD COMPANY, BOSTON, MASS.**



# ANOTHER DAKIN DISCOVERY

## DICHLORAMINE - T

(Toluene - p. sulphondichloramine)

### DAKIN'S OIL SOLUBLE ANTISEPTIC

(Reported in The Journal of the American Medical Association, July 7, page 27, by H. D. Dakin, D. Sc., Herter Laboratory, New York; Walter Estelle Lee, M. D., Pennsylvania Hospital, Philadelphia; Joshua E. Sweet, M. D., Professor of Surgical Research, University of Pennsylvania School of Medicine, and Byron M. Hendrix, Ph. D., Instructor in Physiologic Chemistry, University of Philadelphia School of Medicine, from article read before the American Surgical Association at Boston, June 2, by Robert G. Le Conte, M. D., Philadelphia.)

DICHLORAMINE—T is a practically stable, nonirritating, synthetic double chloramine compound, which can be used in strengths varying from 5 to 10 per cent. (from twenty to forty times the mass of germicide ever present in the usable concentrations of hypochlorites).

When dissolved in Chlorinated Eucalyptol and Paraffin Oil the germicide will be slowly liberated over a period of eighteen to twenty-four hours instead of from thirty minutes to one hour, as with the hypochlorite solutions. DICHLORAMINE—T should be used following a preliminary cleaning with aqueous solutions of CHLORAZENE.

DICHLORAMINE—T is used as an oil spray for nasal and throat work to destroy the micro-organisms of diphtheria, pneumonia, meningitis and other diseases. It is also used as a spray for surface wounds and burns and is poured into deep wounds, thus doing away with intermittent or continuous irrigation of frequent changes in expensive dressings, as are now necessary with the hypochlorites and other antiseptics. This preparation is also admirably adapted for checking the spread of epidemics, such as diphtheria, meningitis, tonsillitis, scarlatina, etc. The oil spray should be used as a prophylactic in suspected cases and exposed patients.

DICHLORAMINE—T is manufactured in this country by The Abbott Laboratories and is now obtainable. We also supply "Chlorinated Eucalyptol, Dakin" and "Chlorinated Paraffin Oil, Dakin," for the preparation of DICHLORAMINE—T Solution according to the technic advised by Dakin. Until the drug-trade is stocked, orders will be filled direct.

### THE ABBOTT LABORATORIES

CHICAGO NEW YORK

Seattle

San Francisco

Los Angeles

Toronto

Bombay

# The Standard Laboratories

## MANUFACTURING PHARMACISTS

**Q**UALITY, SERVICE and PRICE of drugs are necessary to success in the practice of medicine. Our products are manufactured from the purest drugs and chemicals obtainable, under the most skillful supervision, and the service is prompt. Our prices are the lowest consistent with quality.

**YOUR ORDERS SOLICITED**

**2626-2628 Shields Avenue - CHICAGO, ILL.**

Phone Calumet 6090

We are pleased to announce to the Medical  
Profession the introduction of a

SMALL SIZE (6 oz.)

# Gray's Glycerine Tonic Comp.

(FORMULA DR. JOHN P. GRAY.)

The most important reasons for this new departure are briefly:

1. A convenient size for Rx.
2. To meet the conditions occasioned  
by the "high cost of living."
3. To insure proper filling of your  
prescriptions, and as a guard against  
Substitution.

The regular 16 oz. size will be continued as heretofore.  
We trust this innovation will be as cordially received by  
Physicians as has the 16 oz. size for the past 25 years.

THE PURDUE FREDERICK COMPANY,

135 CHRISTOPHER STREET, N. Y. CITY.

In the Treatment of

## Cystitis—Urethritis Pyelitis—Prostatitis—Bacilluria

### HELMITOL

ACTS AS

## *An Efficient Urinary Antiseptic*

Agreeable of Administration—Generally Well-Tolerated  
by the Gastro-Intestinal and Urinary Tract.

**Conveniently taken in Tablets, which readily dissolve.**

Supplied in 5 gr. tablets, bottles of 25 and 100, and in powder in ounces.

Samples and Literature supplied by

THE BAYER COMPANY, Inc.  
117 Hudson St., New York, N. Y.



# Chicago Pasteur Institute

26th YEAR

812 NORTH DEARBORN STREET

CHICAGO

FOR THE PREVENTIVE TREATMENT OF HYDROPHOBIA

ANTONIO LAGORIO, M.D. LL.D., Medical Director

G. B. BRUNO, M.D., Associate Director

FRANK A. LAGORIO, M.D., Associate Director

**Announcement**—When patients are unable to come to Institute, we can furnish physicians our course of Pasteur treatment by mail, in the State of Illinois. Telephone Superior 973.

*N. B.—We have no branches and the use of our name is unauthorised.*

**C**, How can you help to make the JOURNAL the best paying as well as the best reading Journal? *By buying from our Advertisers.* If you saw the “ad” in the JOURNAL, the advertiser is reliable.

## DON'T USE TYPHOID VACCINE ALONE

## USE TYPHOID-PARATYPHOID VACCINE

For all immunizations, as it protects against both infections and costs no more than the typhoid vaccine alone.

### LIST No. 42

One Complete Immunization . . . . .	\$0.50
One 6 Mil (c.c.) Bulk Package . . . . .	1.00
One 20 Mil (c.c.) Bulk Package . . . . .	3.00
One Hospital Package (12 immunizations) . . . . .	3.50

## SWAN-MYERS COMPANY

Pharmaceutical and Biological Laboratories

INDIANAPOLIS

INDIANA, U. S. A.

GOVERNMENT LICENSE No. 58

# ILLINOIS STATE MEDICAL SOCIETY

## SECTION OFFICERS AND COMMITTEES

**SECTION ON SURGERY**  
 John S. Nagel, Chairman.....Chicago  
 H. A. Millard, Secretary.....Minonk

**SECTION ON MEDICINE**  
 C. Martin Wood, Chairman.....Decatur  
 S. R. Slaymaker, Secretary.....Chicago

**SECRETARIES' CONFERENCE**  
 Flint Bondurant, President.....Calro

F. C. Gale, Secretary.....Pekin

**SECTION ON PUBLIC HEALTH AND HYGIENE**  
 Grace Campbell, Chairman.....Chicago  
 W. E. Park, Secretary.....Rockford

**SECTION ON EYE, EAR, NOSE AND THROAT**  
 J. Sheldon Clark, Chairman.....Freeport  
 Wesley H. Peck, Secretary.....Chicago

## COUNTY SOCIETIES

This list is corrected in accordance with the best information obtainable at the date of going to press.  
 County Secretaries are requested to notify The Journal of any changes or errors.

**Adams County**  
 J. L. Aleshire, Pres.....Plainville  
 Elizabeth B. Ball, Secy.....Quincy

**Alexander County**  
 J. W. Dunn, Pres.....Cairo  
 R. E. Barrows, Secy.-Treas.....Cairo

**Bond County**  
 W. T. Easley, Pres.....Greenville  
 J. C. Wilson, Secy.....Greenville

**Boone County**  
 Geo. Markley, Pres.....Poplar Grove  
 H. E. Delavergne, Secy.....Belvidere

**Brown County**  
 D. R. Peters, Pres.....Mt. Sterling  
 E. C. Allworth, Secy.-Treas.....Mt. Sterling

**Bureau County**  
 C. C. Barrett, Pres.....Princeton  
 M. A. Nlx, Secy.....Princeton

**Calhoun County**  
 W. A. Skeel, Pres.....Kampsville  
 J. H. Pelsker, Secy.....Hardin

**Carroll County**  
 G. E. Merchon, Pres.....Mt. Carroll  
 R. B. Rice, Secy.-Treas.....Mt. Carroll

**Cass County**  
 C. E. Soule, Pres.....Beardstown  
 W. R. Blackburn, Secy.....Virginia

**Champaign County**  
 J. H. Finch, Pres.....Champaign  
 John C. Dillenbach, Secy.....Champaign

**Christian County**  
 R. C. Danford, Pres.....Pana  
 S. B. Herdman, Secy.....Taylorville

**Clark County**  
 H. C. Houser, Pres.....Westfield  
 L. J. Welr, Secy.....Marshall

**Clay County**  
 C. E. Duncan, Pres.....Flora  
 R. D. Finch, Secy.....Flora

**Clinton County**  
 Orvil O'Neal, Pres.....Shattuc  
 J. Q. Roane, Secy.....Carlyle

**Coles-Cumberland County**  
 Wm. Smith, Pres.....Toledo  
 R. H. Craig, Secy.-Treas.....Charleston

**Cook County**  
 Chas. E. Humlston, Pres.....Chicago  
 J. V. Fowler, Secy.....Chicago

**Crawford County**  
 A. G. Brooks, Pres.....Stoy  
 C. E. Price, Secy.....Robinson

**DeKalb County**  
 Paul E. N. Greeley, Pres.....Waterman  
 J. B. Hagey, Secy.....DeKalb

**De Witt County**  
 J. M. Wilcox, Pres.....Clinton  
 S. L. Thorpe, Secy.-Treas.....Clinton

**Douglas County**  
 Floyd C. Phillips, Pres.....Arthur  
 Walter C. Blaine, Secy.....Tuscola

**Du Page County**  
 (Affiliated with Cook County)

**Edgar County**  
 Wm. A. Buchanan, Pres.....Paris  
 George H. Hunt, Secy.....Paris

**Edwards County**  
 W. E. Buxton, Pres.....West Salem  
 R. L. Moter, Secy.....Albion

**Effingham County**  
 Frank W. Goodell, Pres.....Effingham  
 F. Buckmaster, Secy.....Effingham

**Fayette County**  
 A. E. Greer, Pres.....Brownstown  
 Mark Greer, Secy.....Vandalia

**Franklin County**  
 Wm. H. Smlth, Pres.....Benton  
 Edgar Austin, Secy.....Benton

**Fulton County**  
 J. C. Simmons, Pres.....Canton  
 B. E. Ray, Secy.-Treas.....Cuba

**Gallatin County**  
 J. W. Bowling, Pres.....Shawneetown  
 A. B. Capel, Secy.....Shawneetown

**Greene County**  
 O. L. Edwards, Pres.....Roodhouse  
 L. O. Frech, Secy.-Treas.....White Hall

**Grundy County**  
 Roscoe Whitman, Pres.....Morris  
 F. C. Bowker, Secy.....Morris

**Hamilton County**  
 E. S. Hall, Pres.....McLeansboro  
 P. M. Nation, Secy.....McLeansboro

**Hancock County**  
 Blalr Kelley, Pres.....Ferris  
 S. M. Parr, Secy.....Carthage

**Hardin County**  
 W. J. J. Parls, Pres.....Rosiclare  
 F. A. Jones, Secy.....Rosiclare

**Henderson County**  
 W. J. Emerson, Pres.....Carman  
 J. P. Riggs, Secy.....Media

**Henry County**  
 Chas. F. Young, Pres.....Geneseo  
 P. J. McDermott, Secy.....Kewanee

**Iroquois-Ford District**  
 O. O. Hall, Pres.....Millford  
 W. L. Cottingham, Secy.....Paxton

**Jackson County**  
 W. A. Brandon, Pres.....Carbondale  
 H. G. Horstman, Secy.....Murphysboro

**Jasper County**  
 John Hamilton, Pres.....Bogota  
 James P. Prestley, Secy.-Treas.....Newton

**Jefferson County**  
 E. E. Edmondson, Pres.....Mt. Vernon  
 Andy Hall, Secy.....Mt. Vernon

**Jersey County**  
 H. R. Bohannan, Pres.....Jerseyville  
 H. F. Threkeld, Secy.....Jerseyville

**Jo Daviess County**  
 A. T. Nadlg, Pres.....Elizabeth  
 T. J. Stafford, Secy.....Stockton

**Johnson County**  
 C. D. Nobles, Pres.....Buncombe  
 H. W. Walker, Secy.....Grantsburg

**Kane County**  
 A. E. Diller, Pres.....Aurora  
 L. J. Hughes, Secy.-Treas.....Elgin

**Kankakee County**  
 C. W. Geiger, Pres.....Kankakee  
 E. S. Hamilton, Secy.-Treas.....Kankakee

**Kendall County**  
 R. A. Schaefer, Pres.....Plano  
 Robt. McClland, Secy.....Yorkville

**Knox County**  
 A. C. Keener, Pres.....Altoona  
 G. S. Bower, Secy.....Galesburg

**Lake County**  
 John P. O'Neil, Pres.....Highland Park  
 C. S. Ambrose, Secy.-Treas.....Waukegan

**La Salle County**  
 R. C. Fullenweider, Pres.....La Salle  
 E. E. Perlsho, Secy.....Streator

(Continued on page 26)



## LOYOLA UNIVERSITY SCHOOL OF MEDICINE

BENNET MEDICAL COLLEGE

Offers Special 4 Weeks' Summer Course in

## OPERATIVE SURGERY

Beginning Aug. 15

Special attention will be paid to the needs of men entering the Medical Corps of the U. S. Army or Navy. Individual instruction. Abundant Fresh Material. Write today for particulars.

1360 W. Fulton St.

CHICAGO

Buy from our advertisers.  
If they don't give as good  
or better value than others,  
kick to us—

*We'll do the rest*

## The STORM Binder and Abdominal Supporter

PATENTED



### SACRO-ILIAC BELT

No Whalebones. No Rubber Elastic.  
Washable as Underwear

High and Low Operations, Hernia,  
Relaxed Sacro-iliac Articulations,  
Floating Kidney, Obesity, Preg-  
nancy, Ptosis, Pertussis, etc.

Send for illustrated folder and Testimonials of Physicians.  
Mail Orders filled within Twenty-four Hours.

KATHERINE L. STORM, M. D.  
1541 Diamond St., PHILADELPHIA, PA.

## 50% Better Prevention Defense Indemnity

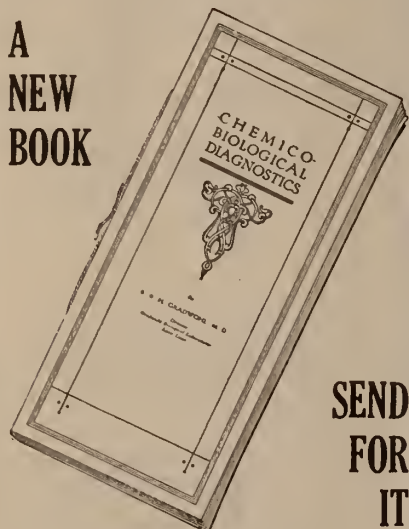
1. All claims or suits for alleged civil malpractice, error or mis- take, for which our contract holder,
2. Or his estate is sued, whether the act or omission was his own
3. Or that of any other person (not necessarily an assistant or agent),
4. All such claims arising in suits involving the collection of pro- fessional fees,
5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
6. Defense through the court of last resort and until all legal remedies are exhausted.
7. Without limit as to amount ex- pended.
8. You have a voice in the selec- tion of local counsel.
9. If we lose, we pay to amount specified, in ad- dition to the unlimited defense.
10. The only contract containing all the above features and which is protection per se.

A Sample Upon Request

The  
MEDICAL PROTECTIVE COMPANY  
of Ft. Wayne, Indiana.

Professional  
Protection, Exclusively

**A  
NEW  
BOOK**



**SEND  
FOR  
IT**

## **GRADWOHL BIOLOGICAL LABORATORIES**

928 North Grand Avenue  
ST. LOUIS, MO.

R. B. H. GRADWOHL, M. D., Director

**A** LIMITED number of copies of "**Chemico-Biological Diagnostics**" will be distributed to interested members of the profession upon request. (Coupon attached).

This book gives up to the minute facts about modern diagnosis, the scope of laboratory consultations, and the interpretations of Micro-Chemical findings.

On every Wassermann specimen we do the **Hecht-Gradwohl Test**; (no additional charge).

**New Blood Chemical Tests** which have proven so valuable in nephritis, diabetes mellitus, gout and rheumatism.

### **PASTEUR TREATMENT BY MAIL**

Course of eighteen treatments by special delivery mail daily.

*Write for literature on any phase of our work  
Slides, Containers, Fee Lists, etc., sent free*

#### **GRADWOHL BIOLOGICAL LABORATORIES**

928 N. Grand Ave., St. Louis, Mo.

Please send me your booklet "Chemico-Biological Diagnostics"

Name.....

City.....

State.....

**ESTABLISHED 1893**

## **Columbus Medical Laboratory**

31 N. STATE ST., CHICAGO

ADOLPH GEHRMAN, Pres.

Send your *pathologic specimens* to us for diagnosis.  
We can assure you a valuable and prompt service.  
Write for instructions and fee table.

Let us make complete examinations in *post-mortem* studies.

Ask for advice in cases of *suspected poisoning* and toxicological work

Consult us when you have *medico-legal cases*.

## **COLUMBUS MEDICAL LABORATORY**

Columbus Memorial Building

CHICAGO, ILL.



With the approach of warm weather, disorders of digestion and resulting intestinal disturbances become prevalent, particularly among infants and children. The treatment, when antiseptics are indicated, is often successfully met by—

## LISTERINE

As a vehicle for other required remedies and as an important part of the treatment of "Summer Complaints," physicians have, for many years, derived much satisfaction from—

## LISTERINE

Its well-defined antiseptic power, unobjectionable odor and taste, and the readiness with which it may be admixed with other drugs, has caused many prescriptions to be written and very good results secured from—

## LISTERINE

"The antiseptic selected for internal administration in these cases must not be astringent, strongly acid or such as will coagulate mucin, but, on the contrary, must be non-irritating, non-toxic and compatible with other medicinal agents likely to be prescribed in conjunction therewith." Such an antiseptic solution is—

## LISTERINE

Listerine literature, including "Acute Intestinal Infections of Children," mailed on receipt of professional card.

# Lambert Pharmacal Company

Twenty-first and Locust Streets,

St. Louis, Mo., U. S. A.

## RADIUM FOR RENT

BY

### THE PHYSICIANS' RADIUM ASSOCIATION of CHICAGO

(Incorporated under the laws of Illinois: "Not for profit")

Any case, in which radium therapy is indicated, is provided for in our large assortment of radium applicators. Loaned on application from any responsible physician, case having first been passed on by us after receipt of adequate information. Certain cases may be sent to our office for treatment. Moderate rental fees charged. For further particulars address

#### THE PHYSICIANS' RADIUM ASSOCIATION

1104 Tower Bldg., 6 N. Michigan Ave.,

Telephones: Randolph 6897-6898

CHICAGO

Board of Directors: WILLIAM L. BAUM, M.D.; THOMAS J. WATKINS, M.D.; FREDERICK MENGE, M.D.; WALTER S. BARNES, M.D.; ALBERT WOELFEL, M.D. Managing Director: ALBERT WOELFEL, M.D.



## CHICAGO LABORATORY CLINICAL ANALYTICAL

Marshall Field Annex Bldg.  
25 E. Washington St.

CHICAGO

Established 1904  
Phone Randolph 3610

**M**ODERN equipment, combined with years of clinical and analytical experience, is at your service. Our reputation and names stand back of our work.

Serological Tests. Pathological Examination of Tissue. Autogenous Vaccines. Complement Fixation Test for Gonorrhea, Sputum, Smears, Pus, etc. Urinalysis, Complete Chemical and Microscopical. All work at moderate prices. Write for our fee table with instructions for sending specimens. Sterile containers and culture media on request. Prompt reports by mail, telephone or telegraph. During the summer season we urge the importance of an analysis of well waters and other sources of supply.

**RALPH W. WEBSTER, M.D., Ph.D.**

*Director of Chemical Department*

**THOMAS L. DAGG, M.D.**

*Director of Pathological Department*

**C. CHURCHILL CROY, M.D.**

*Director of Bacteriological Department*





# HORMOTONE

The Dynamogenic Hormone Tonic for

## Asthenic Conditions

HORMOTONE has been used with success in the treatment of many intractable cases. It is primarily indicated in adrenal insufficiency, but is also useful in functional impotence, sterility due to ovarian insufficiency, amenorrhea, dysmenorrhea and menopausal disorders.

The Fatigue Syndrome Yields to  
Hormotone as to No Other Agent

DOSE: *One or two tablets three times daily before meals.*

In Neurasthenia associated with High Blood Pressure use

**HORMOTONE WITHOUT PITUITARY**

**G. W. CARNRICK CO., 31 Sullivan Street, NEW YORK**



Trade Mark of  
The Society of Chemical  
Industry in Basle,  
Switzerland

*The premier digitalis*

is the digitalis which gives you  
results when others have failed

## DIGIFOLINE CIBA

will stand this test

according to the actual experiences  
of physicians

*Tablets and Ampoules*

Send for Literature

## A. KLIPSTEIN & COMPANY

New York



## In convalescence — Pure Milk! Safe Milk!

**S**AFE all the way from dairy farm to consumer, protected by special process of desiccation, perfectly soluble, rendered digestible, assimilable and appetizing by admixture with the proteins, fats and carbohydrates of malt and eggs in correct proportion. Flavored with cocoa.

Your patient will not tire of

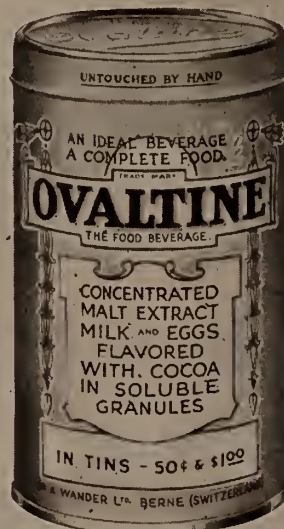
# OVALTINE

*For samples and complete analysis  
write to*

**The Wander Company**  
Dept. 4, 23 North Franklin St.  
Chicago

*Established 1865 by Dr. A. Wander Co., Ltd., Berne, Switzerland.*

*Ovaltine is used by leading European physicians  
and dietitians, also in recuperating  
bases of allied armies.*



**A Complete  
Food Beverage**





**KORA-KONIA** has antacid, mildly astringent, antiseptic and haemostatic value affording a perfect dry treatment for sunburn, rash, prickly-heat, poison ivy, blisters, chafing, insect bites, raw, moist or discharging surfaces.

**KORA-KONIA** is an efficient dusting powder exerting a cooling, healing and soothing influence. It brings relief to feverish, blistered or broken skin surfaces, rest and comfort to patient and satisfaction to Physician. True worth combined with convenient size and form of package make **KORA-KONIA** a valuable first-aid. The results obtained by the use of **KORA-KONIA** in actual practice have secured for it the endorsement and recommendation of Physicians who know.

**KORA-KONIA** aids in granulation and is an absorbent, protective, non-irritating, chemically correct dusting powder of uniform reliability.

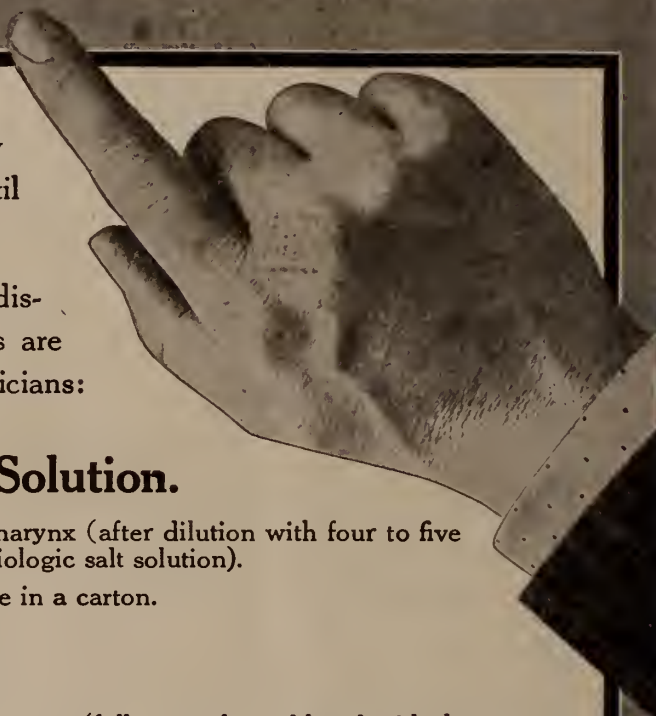
Supplied by your Druggist—25c  
Test-it-yourself-package FREE by writing to

**THE HOUSE OF MENNEN NEWARK, N. J.**

# Hay-Fever Time

The Autumnal type of Hay Fever is here! It will last until frost-time.

For the treatment of this distressing malady these products are confidently commended to physicians:



## Adrenalin Chloride Solution.

For spraying the nose and pharynx (after dilution with four to five times its volume of physiologic salt solution).

Supplied in ounce bottles, one in a carton.

## Adrenalin Inhalant.

For spraying the nose and pharynx (full strength or diluted with three to four times its volume of olive oil).

Supplied in ounce bottles, one in a carton.

## Ragweed Pollen Extract.

For prophylaxis and treatment (administered hypodermically).

Packages containing full treatment: three 5-mil (Cc.) vials of 10 units, 100 units and 1000 units per mil (Cc.), respectively; one vial of physiologic salt solution for use as a diluent, and one scarifier.

Single vials of 1000 units strength.

Special diagnostic packages for testing the patient's susceptibility.

Full directions accompany each package.

See that your druggist is able to supply you.

Home Offices and Laboratories,  
Detroit, Michigan.

**Parke, Davis & Co.**

FIFTY YEARS OF PHARMACEUTICAL PROGRESS



## FELLOWS' SYRUP

Differs from other preparations of the Hypophosphites. Leading Clinicians in all parts of the world have recognized this important fact. **HAVE YOU?**

**TO INSURE RESULTS,  
Prescribe the Genuine**

**R Syr. Hypophos. Comp. FELLOWS'**

**REJECT** < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL MANF. CO. LTD.  
25 CHRISTOPHER ST.  
NEW YORK

## TUBERCULOSIS - ALBUQUERQUE, NEW MEXICO

Climatic Conditions Unsurpassed  
Altitude 5000 feet  
In the LAND OF SUNSHINE

Experienced Medical Supervision  
Trained Nurses in Constant Attendance  
All Approved Therapeutic Measures Employed

**The Murphey Sanatorium**



A High-Class Institution for the Treatment of Tuberculosis.  
Forty Rooms—Ten with private bath—Thirty with bath between each two rooms.  
Every Room has a Private Sleeping Porch.  
Located in the midst of beautiful Mountain Scenery.

Rates: \$18.50 to  
\$25.00 per week  
**NO EXTRAS**

DESCRIPTIVE BOOKLET AND FULL INFORMATION MAILED ON REQUEST

**THE MURPHEY SANATORIUM,**

**Albuquerque, New Mexico**

**W. T. MURPHEY, M. D.,**  
MEDICAL DIRECTOR

**MRS. HATTIE SOWER,**  
SUP'T.

**DAVID A. SPEAR, M. D.**  
BACTERIOLOGIST

## THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILL.

is devoid of the "institutional atmosphere."  
It is designed and conducted to meet the  
requirements of patients who demand

**Privacy and  
Individual Attention**

*Special consideration is given  
to Quality of Service*

**Rates \$25.00 to \$35.00 per week**

**H. V. PETTIT, Supt.**

OTTAWA

ILLINOIS



## Chicago Fresh Air Hospital

(FOR TUBERCULOSIS)

*At Rogers Park, Chicago, Illinois*

Patients received in *all* stages of Pulmonary Consumption.

Private Rooms and Board, \$25.00 per week.

Open Porch and two-bed Rooms, with Board, \$15.00.

**Tuberculin Treatment  
Artificial Pneumo-Thorax**

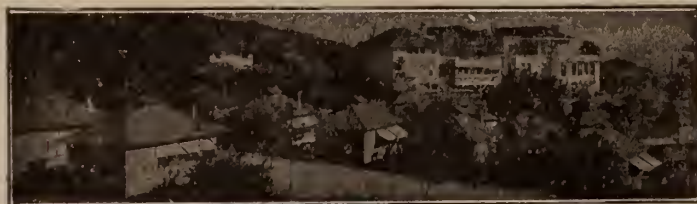
**DR. ETHAN A. GRAY,**

*Medical Superintendent.*

## THE POTTENGER SANATORIUM

MONROVIA, CALIFORNIA

**FOR DISEASES OF THE LUNGS AND THROAT**



A thoroughly equipped institution for the scientific treatment of tuberculosis. High class accommodations. Ideal all-year-round climate. Surrounded by orange groves and beautiful mountain scenery, 45 minutes from Los Angeles.

**F. M. POTTENGER, A.M., M.D. LL.D.,**  
Medical Director.

**J. E. POTTENGER, A.B., M.D.,** Assistant  
Medical Director and Chief of Laboratory.

**GEORGE H. EVANS, M.D.** San Francisco,  
Medical Consultant.

**For Particulars, Address THE POTTENGER SANATORIUM, Monrovia, California**  
LOS ANGELES OFFICE, 1100-1101 TITLE INSURANCE BUILDING, FIFTH AND SPRING STREETS



## EDWARD SANATORIUM

For the Treatment of Incipient Pulmonary Tuberculosis  
NAPERVILLE, ILLINOIS



Established 1907. Attractive surroundings. Large grounds. Open-air sleeping cottages and infirmary with all appointments necessary for the comfort of the patients.  
Modern hygienic-dietetic method of treatment. Medical and laboratory facilities. Resident physicians and trained nurses.

Tuberculin Treatment and Artificial Pneumothorax in suitable cases

*For detailed information, rates and rules of admission, apply to*

CHICAGO TUBERCULOSIS INSTITUTE, 8 South Dearborn Street, Room 1212, CHICAGO, ILL.



On Main Line Chicago, Milwaukee & St. Paul Railway  
30 Miles West of Milwaukee

## Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

For Nervous and Mild Mental Diseases

Building New, Most Approved Fireproof Construction

ARTHUR W. ROGERS, M.D., Resident Physician in Charge  
LONG DISTANCE TELEPHONE

Built and equipped to supply the demand of the neurasthenic, borderline and undisturbed mental case for a high class home free from contact with the palpable insane, and devoid of the institutional atmosphere. Forty-one acres of natural park in the heart of the famous Wisconsin Lake Resort Region. Rural environment, yet readily accessible. The new building has been designed to encompass every requirement of modern sanitarium construction, the comfort and welfare of the patient having been provided for in every respect. The bath department is unusually complete and up-to-date. Number of patients limited, assuring the personal attention of the resident physician in charge.

*Trains meet at Oconomowoc on request.*

## The Norbury Sanatorium

JACKSONVILLE -- ILLINOIS

Established by Dr. Frank P. Norbury, 1901

Incorporated and Licensed

“Maplewood” — “Maplecrest”

Capacity Forty Beds

PRIVATE RESIDENTIAL HOMES for the treatment of Nervous and Mental Disorders. Especial attention given to the treatment, by approved modern methods, of the Psychoneuroses, Exhaustion states and selected Psychoses and addiction cases.

DR. FRANK P. NORBURY,  
Medical Director. (Late  
Allenist, State Board of Ad-  
ministration. Formerly  
Supt., Kankakee State Hos-  
pital.)

DR. ALBERT H. DOLLEAR  
Superintendent (Late  
Clinical Asst., State Psycho-  
pathic Institute, Kankakee,  
Formerly Asst. Supt., Water  
town State Hospital.)

Address all communications, THE NORBURY SANATORIUM, 806 South Daimond Street, JACKSONVILLE, ILLINOIS  
Springfield Office, DR. FRANK P. NORBURY, 407 South Seventh Street, by appointment

# Kenilworth Sanitarium

(Established 1905)



All correspondence should be addressed to Kenilworth Sanitarium, Kenilworth, Illinois

**KENILWORTH, ILLINOIS**  
(C. & N.-W. Railway. Six miles north of Chicago)

Built and equipped for the treatment of nervous and mental diseases. Approved diagnostic and therapeutic methods. An adequate night nursing service maintained. Sound proof rooms with forced ventilation. Elegant appointments. Bath rooms en suite, steam heating, electric lighting, electric elevator.

## Resident Medical Staff

Ella Blackburn, M. D., Sherman Brown, M. D.,  
Sanger Brown, M. D.,  
Chicago Office: 59 East Madison Street  
Telephone: Randolph 5794. Consultation by appointment only



Established 1867

# BELLEVUE SANITARIUM

BATAVIA, ILLINOIS  
near CHICAGO

*For Nervous and Mental Diseases  
of Women Only*

Restful, homelike and accessible. Treatment modern,  
scientific and ethical.

TERMS MODERATE. WRITE FOR BOOKLET

# THE RIVERSIDE SANITARIUM



RATES UPON  
REQUEST

Address F. C. STUDLEY, M. D., Milwaukee

For Nervous and Mild Mental Diseases

SEPARATE DEPARTMENT FOR NON-  
MENTAL CASES  
SELECTED ALCOHOLIC CASES ACCEPTED

Located in the beautiful suburb of East Milwaukee

Beautiful apartments, single or en suite—  
private bath rooms—amusement hall—  
billiard room—gymnasium—sun parlors.

Full scientific equipment.



BUILDING ABSOLUTELY FIRE-PROOF

# Waukesha Springs Sanitarium

FOR THE CARE AND TREATMENT OF  
**NERVOUS DISEASES**

BYRON M. CAPLES, M.D., Superintendent

Waukesha

::

Wisconsin





# NEURONHURST



Dr. W. B. Fletcher's Sanatorium



**For Treatment of Mental and Nervous Diseases, Including Legally Committed and Voluntary Cases**

Well equipped with all facilities for the care and treatment of all forms of mental and nervous diseases, inebriety, drug addiction and those requiring recuperation and rest. Gynecological department is in charge of skilled women physicians. All approved forms of Hydrotherapy, Balneotherapy, Massage, Swedish Movements, etc. All forms of Electrical Treatments. Phototherapy, High Frequency and X-Ray work. A strictly ethical institution. Correspondence with physicians invited. For particulars and terms, address:

**DR. MARY A. SPINK, Superintendent.**

Long Distance Telephones

**1140 E. Market St., INDIANAPOLIS**

## DR. SIDNEY D. WILGUS

Retiring Superintendent of Kankakee State Hospital, also former Superintendent of Elgin State Hospital,

### Begs to Announce

**that he has purchased a Sanitarium at Rockford, Ill. (The Ransom)**

and is prepared to give personal care and attention to mental and nervous cases and drug addictions. Modern features having been added, the equipment is qualified to give up-to-date treatment. Also tennis, croquet, boating, and other out-door exercises are prescribed. A nine-hole golf course is near by. Correspondence solicited, or, to save time, telephone: Long Distance, Rockford 3767, and reverse the charges. On request patients are met at any train with an automobile.

**Mail address, DR. SIDNEY D. WILGUS, Box 304, Rockford, Ill.**

Chicago Office. Thursday Mornings until 12 at Suite 1603, 25 E. Washington St.

And by appointment



ENTRANCE



WEST HOUSE



OFFICE AND BATH HOUSE



PSYCHOPATHIC HOSPITAL



GYMNASIUM

Established  
in 1884

## THE MILWAUKEE SANITARIUM

For Mental and Nervous Diseases

Wauwatosa,  
Wis.

Located at Wauwatosa (a suburb of Milwaukee) on C., M. & St. P. Ry., 2 1/2 hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two lines street cars. Complete facilities and equipment as heretofore announced. Psychopathic Hospital: Continuous baths, fireproof building, separate grounds. West House: Rooms en suite with private baths. Gymnasium and Recreation Building: Physical culture, "Zander" machines, shower baths. Modern Bath House: Hydrotherapy, Electrotherapy, Mechanotherapy. 30 acres beautiful hill, forest and lawn. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

**RICHARD DEWEY, A. M., M. D.**

**EUGENE CHANEY, A. M., M. D.**

**WILLIAM T. KRADWELL, M. D.**

CHICAGO OFFICE: Marshall Field Annex, 25 E. Washington Street, Room 1823. Wednesdays 1 to 3 P. M., (except in July and August) Tel. Centra 1168  
MILWAUKEE OFFICE: Goldsmith Building, Room 504. Consultation by appointment. Tel. Main 81.  
TELEPHONE SANITARIUM OFFICE: Milwaukee-Wauwatosa 16.



## The Cincinnati Sanitarium For Mental and Nervous Diseases

Incorporated 1873

A strictly modern hospital fully equipped for the scientific treatment of nervous and mental affections. Situation retired and accessible. For details write for descriptive pamphlet.

F. W. Langdon, M.D., Medical Director

B. A. Williams, M.D., Resident Physician

Emerson A. North, M.D., Resident Physician

H. P. COLLINS, Business Manager, Box No. 4, College Hill, Cincinnati, Ohio



ABSOLUTELY FIREPROOF BUILDING

LESS THAN THREE HOURS FROM CHICAGO

## Mud Baths

For the treatment of RHEUMATISM, Nervousness, Kidney, Liver and Skin Diseases, and all ailments requiring elimination and relaxation. Location beautiful; climate healthful; 80 acres of private grounds.

DR. AUGUSTUS S. GILLES, Medical Director

*Correspondence with physicians solicited*

For rates, literature and reservations, address

**Waukesha Moor (Mud) Bath Co.**

WAUKESHA, WISCONSIN

## "BEVERLY FARM"

Home and School for Nervous and Backward Children

5 buildings, schools and gymnasium, 176 acres of land, 40 acres of timber, containing beautiful Camp Belle log cabin for recreation; separate buildings for boys and also children under 10 years of age. Thirty-six years experience. Consultations at home if desired. Publicity avoided. Address all communications to

**W. H. C. SMITH, M. D., Superintendent**

GODFREY, MADISON CO., ILLINOIS

*"Beverly Farm" was awarded Grand Prize by Committee of Awards of the Louisiana Purchase Exposition*

## The Peoria Mud Baths

We insist that your patients can eliminate as freely and as effectually in Illinois as in any other State in the Union.

Strict ethical relations. Thoroughly equipped. Have had thousands of patients.

DR. T. W. GILLESPIE, Medical Supt.

**SULPHUR SPRINGS SANITARIUM**

215-217 N. Adams St. Peoria, Illinois





## DR. WEIRICK'S SANITARIUM

FORMERLY DR. BROUGHTON'S SANITARIUM  
ESTABLISHED IN 1901

**For Opium, Morphine  
Cocaine and Other Drug  
Addictions, Including  
Alcohol and Special  
Nervous Cases**

Methods easy, regular, humane.  
Good heat, light, water, help, board,  
etc. Number limited to 44. A well  
kept home. Nervous-Mental De-  
partment in charge of Dr. W. L.  
Ransom. Address

**DR. G. A. WEIRICK**  
SUPERINTENDENT

**2007 South Main Street**

Phone 536  
**Rockford - - - Illinois**

### PETTEY & WALLACE 958 S. Fifth Street MEMPHIS, TENN. SANITARIUM



FOR THE TREATMENT  
OF

**Drug Addiction, Alcoholism,  
Mental and Nervous Diseases**

A quiet, home-like, private, high-  
class institution. Licensed. Strictly  
ethical. Complete equipment. Best  
accommodations.

Resident physician and trained  
nurses.

Drug patients treated by Dr.  
Petty's original method.

Detached building for mental  
patients.

# The Peoria Sanatorium

A private Sanatorium for the treatment of Nervous and Mental Diseases,  
by modern methods. Flowing Sulphur Spring. Licensed by the State.

**DRUG AND LIQUOR HABITS TREATED**

WRITE FOR BOOKLET

Director, DR. GEO. W. MICHELL

PHONE MAIN 225.

Address, 106 N. Glen Oak, PEORIA, ILL.

# LEUZARDER'S

## One Book System of Practical Book-keeping

A perfect system of Book-keeping, with **Cash Journal, Ledger, Etc., all in one Book.**

The most compact, simple, convenient and practical method of handling accounts which has ever been presented.

**Each book is complete in itself and carries a full set of instructions and examples.**

Especially arranged for the use of Dentists, Doctors, Surgeons, Lawyers, and others whose income is derived from personal service.

**PRICE SIX DOLLARS**

## B. T. LEUZARDER & CO.

New York Life Building,

Chicago, Ill.

**Preparedness is the Slogan of the Day. We are Prepared**

to furnish promptly to the specialist in every branch of surgery the correct instrument and apparatus which are of such great assistance in the performance of the Surgeon's work



**V. MUELLER & CO.,** Makers of Surgeons' instruments, Hospital and Office Equipment, 1771-1781 Ogden Ave., CHICAGO



## *You do not need a special syringe*

or an extra-calibred needle to use our aseptic, ampuled, sterilized solutions. Mercury salicylate, for example—and a noteworthy example, too—for this is usually a dense product that will not flow through the regular hypodermic needle.

Your regular syringe and needle will be all you need when you use our ampules—at once a convenience and an economy which every medical man will appreciate in these days of war-time stress.

May we send you a list of our Ampules?

**SHARP & DOHME**  
**BALTIMORE**

Hypodermic Specialists Since 1882

## *READER!*

are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society.

Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the “ad” in the JOURNAL.

# Loyola University

## School of Medicine

BENNETT MEDICAL COLLEGE

**O**FFERS a Five Year Course in Modern Scientific Medicine leading to the M. D. Degree, and a Six Year Course leading to the B. Sc. M. D. Degree. ¶ Individual instructions in large well equipped laboratories, and in fifteen metropolitan hospitals and dispensaries. ¶ Internships available for all graduates. ¶ Many opportunities in city for self help.

WRITE FOR CATALOGUE, HOSPITAL FOLDER  
AND "SELF-HELP FACTS"

1360 West Fulton Street

CHICAGO

## PRESCRIPTION SERVICE THAT SATISFIES

The service that firmly holds customers and constantly attracts new ones, is SERVICE that SATISFIES.

The facilities of

**THE WHITE-HAINES OPTICAL CO.**

are equal to the severest test.

ACCURACY is our first consideration.

Prompt Deliveries consistent with accuracy is our second consideration.

Our ability to handle a large volume of work promptly is worthy of your consideration.

We are Headquarters for Punktals, Kryptoks, Ultex one-piece, Naktic and Korectal (Trade Mark Reg.) lenses.

*Try our "SERVICE THAT SATISFIES"*

**THE WHITE-HAINES OPTICAL CO.**

COLUMBUS, O.    INDIANAPOLIS, IND.    SPRINGFIELD, ILL.



# Chicago College of Medicine and Surgery

**MEDICAL  
DEPARTMENT OF  
VALPARAISO  
UNIVERSITY**



**Main College Building and Willard Hospital**

**702-706  
SO. LINCOLN ST.  
CHICAGO, ILL.**

This College has an enrollment of 500 students. The Laboratory and Hospital facilities are abundant.  
The Faculty consists of men who have distinguished themselves as medical educators.  
The College is not burdened with debts and is therefore able to expend all of its income upon the courses of instruction.  
The Calendar year is divided into three semesters of four months each. The Fall semester begins on the last Tuesday in September. The Winter semester begins on the first Monday in February. The Summer semester begins on the first Monday in May.

*For catalogue or further information address*

**J. NEWTON ROE, Secretary**

**706 S. Lincoln St., Chicago, Ill.**

## Chicago Eye, Ear, Nose and Throat College

**A Post-Graduate School for Prac-  
titioners of Medicine**

**235 W. Washington Street  
Chicago, Ill.**

*Catalogue on Application*

## Chicago Maternity Hospital and Training School for Nurses

**ACCOMMODATES 25 PATIENTS  
RATES: \$10.00 to \$25.00 PER WEEK**

Well infants cared for in nursery for \$5.00 per week.  
Training School for Obstetrical and Infants' nurses.

Address

**EFFA V. DAVIS, M.D., 2314 N. Clark St., Chicago**

## Home Training In Nursing



We offer a thorough extension course to beginners and also to practical nurses wishing to perfect themselves in the theory and science of nursing.

There is in every community a demand for competent nurses — women physically qualified and possessing natural ability, who for various reasons cannot leave home to get their training. Through the aid of the very thorough system of instruction used by this school for a period of sixteen years, we have trained hundreds of women who have "made good" as practical nurses. In fact our graduates adapt themselves to the inconveniences of private nursing more readily than the hospital-trained nurse. They are loyal to the home doctor, whose co-operation has made their success possible.

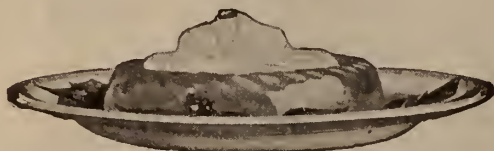
Reputable physicians are invited to investigate our methods and co-operate with us by sending the names of earnest women who in their estimation would make desirable applicants. Tuition fees very reasonable—small payment plan. Write for the Sixteenth Annual Announcement. Address

**Karen Esmann, Registrar  
CHICAGO SCHOOL OF NURSING  
116 S. Michigan Blvd., Chicago, Ill.**

# Gelatine

## In Its Most Inviting Form

### Test Lots Free



Gelatine is gaining new recognition as a food for ailing people.

It is the most efficient protein-sparer known. It will save half its weight of protein from destruction. It is easily digested. It does not burden the kidneys.



*Our Latest Flavor*

Waukesha gelatine, used in Jiffy-Jell, is the highest grade produced. It is worth on the market twice as much as the common. And we control the output.

In Jiffy-Jell it is instantly prepared. Simply add boiling water. Then add the fruit-juice flavor from the vial that is inclosed in each package.

All the fruit flavors in Jiffy-Jell are made from the fruit itself. All come sealed in vials. Thus Jiffy-Jell desserts are made doubly delightful. Let us send you enough to try.



*True Fruit Flavors*

### Flavors in Vials

These fruit-juice flavors, sealed in vials, give the tang and zest of the fresh ripe fruit. And the flavor isn't spoiled in the making. It isn't scalded. The flavor is added when the jell has partly cooled.



Jiffy-Jell desserts need no fresh fruit to be appetizing, though fresh fruit can be added. Other things may be added, like puffed wheat or rice, nuts, chocolate or whipped cream. There are a hundred forms of Jiffy-Jell desserts.



### Flavors Not Scalded

Ask us for a test assortment. A Recipe Book will come with it. Learn how delightful are these quick, fruity desserts when flavored in this way.

Jiffy-Jell is made in America's model food plant. It is made by Otis E. Glidden, the famous gelatine expert. It will give you a new conception of gelatine desserts.



**Test Lots Free**  
To Physicians and  
Hospitals on Request.  
Hospital Sizes  
Twice the Ordinary.

# Jiffy-Jell

**The Supreme Dessert**

Fruit-Juice Flavors in Vials  
WAUKESHA PURE FOOD CO.  
Waukesha, Wis.

### Eight Flavors

Strawberry	Orange
Raspberry	Lemon
Cherry	Lime
Pineapple	Mint



## INDEX TO ADVERTISERS

Abbott Laboratories.....	7
Bayer Company.....	8
Bellevue Sanitarium.....	22
Beverly Farm School.....	24
Carrick, G. W., Co.....	15
Chicago College of Medicine and Surgery.....	29
Chicago Eye, Nose & Throat College.....	29
Chicago Fresh Air Hospital.....	20
Chicago Laboratory.....	14
Chicago Maternity Hospital.....	29
Chicago Pasteur Institute.....	9
Chicago School of Nursing.....	29
Cincinnati Sanitarium.....	24
College of Medicine, Univ. of Ill.....	11, 30
Columbus Medical Laboratory.....	12
Crittenton, Chas. N., Co.....	15
Edward Sanatorium.....	21
Fellows Medical Mfg. Co.....	19
Fletcher's Sanatorium.....	23
Gradwohl Biological Laboratories.....	12
Horlick's Malted Milk Co.....	2
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Laboratory of Pathology and Bacteriology.....	2
Lambert Pharmaceutical Company.....	13
Lederle Antitoxin Laboratory.....	35
Leuzarder & Co.....	26
Loyola University School of Medicine.....	11, 30
McIntosh, John, Co.....	36
Medical Protective Co.....	11
Mead, Johnson & Co.....	4
Mellier Drug Co.....	4
Mennen.....	17
Mellin's Food Co.....	6

Milwaukee Sanitarium.....	23
Mosby Co., C. V.....	36
Mueller & Co., V.....	25
Murphey Sanatorium.....	19
Norbury Sanitarium.....	21
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Parke, Davis & Co.....	18
Pennoyer Sanitarium.....	6
Peoria Mud Baths.....	24
Peoria Sanatorium.....	25
Petty & Wallace's Sanitarium.....	25
Phillips Co., Chas. H.....	32
Physicians' Radium Association.....	13
Pine Sanatorium.....	34
Pitman-Moore Co.....	4
Pottenger Sanatorium.....	20
Purdue, Frederick, Co.....	8
Pure Gluten Food Co.....	5
Quaker Oats Co.....	5, 33
Radium Institute.....	36
Ransom Sanitarium.....	23
Riverside Sanitarium.....	22
Saunders Co., W. B.....	front cover
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Sherman, G. H., M. D.....	5
Standard Laboratories.....	7
Standard Oil Co.....	3
Storm, Katherine L., M. D.....	11
Swan-Myers Co.....	9
Tilden Co., The.....	6
Victor Electric Co.....	1
Wander, Dr. A.....	16
Waukesha Moor (Mud) Bath Co.....	24
Waukesha Springs Sanitarium.....	22
Waukesha Pure Food Co.....	30
Weirick's Sanitarium.....	25
White-Haines Optical Co.....	28

## BUYER'S INDEX

## ABDOMINAL SUPPORTERS

Storm, Katherine L., M. D.....	11
--------------------------------	----

## AUTOMOBILES, ETC.

Standard Oil Co.....	3
----------------------	---

## FOOD

Horlick's Malted Milk Co.....	2
Mead, Johnson & Co.....	6
Mellin's Food Co.....	6
Pure Gluten Food Co.....	5
Quaker Oats.....	5, 33
Wander's Ovaltine.....	16
Waukesha Pure Food Co.....	30

## HOSPITAL

Chicago Fresh Air Hospital.....	20
Chicago Maternity Hospital.....	29

## INVESTMENTS AND INSURANCE

Medical Protective Co.....	11
----------------------------	----

## LABORATORY

Abbott Laboratories.....	7
Chicago Laboratory.....	14
Columbus Medical Laboratory.....	12
Gradwohl Biological Laboratories.....	12
Laboratory of Pathology and Bacteriology.....	2
Standard Laboratories.....	7
Swan-Myers Co.....	16

## MEDICAL BOOK PUBLISHERS

Saunders Co., W. B.....	front cover
Mosby Co., C. V.....	36

## MEDICAL SCHOOLS

Chicago College of Medicine and Surgery.....	29
Chicago Eye, Ear, Nose and Throat College.....	29
College of Medicine, Univ. of Ill.....	11, 30
Loyola University School of Medicine.....	11, 30

## MUD BATHS

Peoria Mud Baths.....	24
Waukesha Moor (Mud) Bath Co.....	24

## NURSES

Chicago School of Nursing.....	29
--------------------------------	----

## PHARMACEUTICALS

Abbott Laboratories.....	7
Bayer Company.....	8
Carrick, G. W., Co.....	15
Crittenton, Chas. N., Co.....	15
Fellows Medical Mfg. Co.....	19
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Lederle Antitoxin Laboratory.....	35
Lambert Pharmaceutical Company.....	13
Mead, Johnson & Co.....	4
Mellier Drug Co.....	4
Mennen.....	17
Parke, Davis & Co.....	18
Phillips Co., Chas. H.....	32
Pitman-Moore Co.....	4
Purdue, Frederick, Co.....	8
Sherman's Bacterins.....	5
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Swan-Myers Co.....	9
Tilden Co., The.....	6

## SANATORIA &amp; SANITARIA

Bellevue Sanitarium.....	22
Cincinnati Sanitarium.....	24
Edward Sanatorium.....	21
Fletcher's Sanatorium.....	23
Kenilworth Sanitarium.....	22
Norbury Sanitarium.....	21
Milwaukee Sanitarium.....	23
Murphey Sanatorium.....	19
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Pennoyer Sanitarium.....	6
Peoria Sanitarium.....	25
Petty & Wallace's Sanitarium.....	25
Pine Sanatorium.....	34
Pottenger Sanatorium.....	20
Radium Institute.....	36
Ransom Sanitarium.....	23
Riverside Sanitarium.....	22
Waukesha Springs Sanitarium.....	22
Weirick's Sanitarium.....	25

## SURGICAL INSTRUMENTS

McIntosh, John, Co.....	36
Mueller & Co., V.....	30
Victor Electric Co.....	26

IN PLACE OF OTHER ALKALIES USE

# Phillips' Milk of Magnesia

"THE PERFECT ANTACID"

For Correcting Hyperacid Conditions—Local or Systemic. Vehicle for Salicylates, Iodides, Balsams, Etc.

Of Advantage in Neutralizing the Acid of Cows' Milk for Infant and Invalid feeding.

## Phillips' Phospho-Muriate of Quinine Compound NON-ALCOHOLIC TONIC AND RECONSTRUCTIVE

With Marked Beneficial Action Upon the Nervous System. To be relied Upon Where a Deficiency of the Phosphates is Evident.

THE CHAS. H. PHILLIPS CHEMICAL CO.  
NEW YORK LONDON

### DON'T FORGET

to patronize our advertisers, and to mention the fact that you saw their advertisement in the

ILLINOIS MEDICAL JOURNAL.

### DO YOU KNOW OF ANY CONTESTED

insurance claims? Our bureau renders its clients expert service in securing policyholders and beneficiaries holding health and accident policies satisfactory adjustment of disputed claims. Our work is conducted through the medical profession. Complete details regarding our system sent upon request to Dr. W. E. Magruder, Med. Dir., Nat. Investigation Bureau, 924 Madison Ave., Baltimore, Md. KK

### CONTENTS—Continued

#### ORIGINAL ARTICLES.

The Physician and the Proof of Death or Disability for the Insurance Company. Clifford U. Collins, M.D., Peoria, Ill. ....	111
Cesarean Section. H. M. Orr, M.D., La Salle, Ill. ....	116
One Step Further in the Treatment of Acidosis in Children. H. C. Blankmeyer, M.D., Springfield, Ill. ....	119
"Lest We Forget," or Dr. Crawford W. Long, the First Anesthetist. Charles B. Johnson, M.D., Champaign, Ill. ....	122
An Etiological Study of Acute Arthritis. Warren R. Rainey, M.D., East St. Louis, Ill. ....	129

#### EDITORIAL

The Alien and the Draft. ....	133
Beg Your Pardon. ....	133
Census Bureau Wants Accurate Statements. ....	133
Tri-State District Medical Society Program. ....	133
The Medical Practice Act. ....	135
New Superintendents. ....	136

#### CORRESPONDENCE.

Dr. Steele's Resignation. ....	136
The Medical Situation. Dr. Bayard Holmes. ....	137
Medicological "Ophthalmologist" and Optometry. ....	138

#### PUBLIC HEALTH.

Doctors Respond to War's Demand. ....	139
Sanitary Service About Rockford Cantonment. ....	139
Typhoid in Decatur. ....	139
Sanitary Survey at Freeport. ....	139
Prevalence of Infantile Paralysis. ....	140
Physicians' Examinations. ....	141

#### SOCIETY PROCEEDINGS.

Chicago Laryngological and Otological Society. ....	141
Chicago Ophthalmological Society. ....	146
Madison County. ....	147
Pike County. ....	147
Personal. ....	148
News Notes. ....	148
Marriages. ....	150
Deaths. ....	150
Book Notices. ....	150



# HALAZONE

## THE NEW DAKIN-DUNHAM WATER STERILIZATION TABLET

In a recent report (British Medical Journal, May 26) to the British Medical Research Committee by H. D. Dakin, D. Sc., F. R. S., and E. K. Dunham, Major U. S. Army Medical Service, on the "Disinfection of Drinking Water," announcement was made of a new substance for the preparation of stable tablets for the sterilization of polluted water.

This substance is p. sulphondichloramino-benzoic acid. The synthetic name being inconvenient for ordinary use, the tablets will be known as Halazone.

Halazone is manufactured and supplied in America by The Abbott Laboratories.

Halazone Tablets are more stable than any chlorine preparations now being used for this purpose, and the resultant sterilized water is not unpleasant to the taste.

Laboratory tests show that drinking water containing *Bacillus Coli*, and polluted by pathogenic organisms, such as *B. typhosus*, *B. paratyphosus* A and B, *V. cholerae*, *B. dysenteriae* (Flexner), *B. dysenteriae* (Shiga), and 5 percent sewage are made sterile in from 15 to 60 minutes with Halazone Tablets.

The concentration of the disinfectant used was from 1 to 200,000 to 1 to 500,000.

Four milligrams (1/16 grain) of Halazone in tablet form will sterilize one quart of water.

The sterilization of contaminated water is of particular importance at this time. The Dakin-Dunham Tablets will prove of great value, not only for the purification of suspicious and polluted drinking water for military and civil use, but will be used in farming communities for the sterilization of well water for human and veterinary use, and also for the sterilization of dairy utensils. Physicians, dentists, veterinarians and pharmacists will welcome this announcement of a powerful and stable water sterilization tablet such as Dakin has now developed. Travelers, campers and automobilists will find Halazone Tablets of decided benefit, as well as hospitals, hotels, schools, public institutions, and manufacturing establishments.

Dr. H. D. Dakin, who is already well known by reason of his wonderful contribution to anti-septic surgery in Dakin's Solution and Chlorazene, has now, with the able cooperation of Dr. E. K. Dunham, won new laurels in the field of sanitation through this improved, stable, water sterilization tablet known as Halazone.

Correspondence with physicians, hospitals, health boards and industrial users is invited.

### PACKAGES AND PRICES

Bottles of 100, \$0.25; 500, \$0.60; 1000, \$1.00

## THE ABBOTT LABORATORIES

CHICAGO - NEW YORK

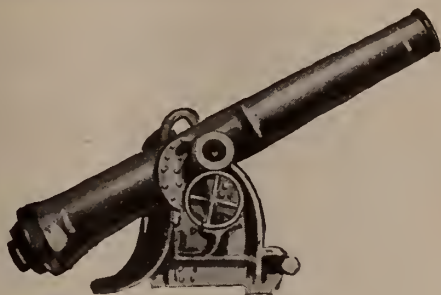
SEATTLE

SAN FRANCISCO

LOS ANGELES

TORONTO

BOMBAY



## Foods Shot From Guns

Puffed Wheat and Puffed Rice are steam-exploded grains, puffed to eight times normal size.

The grains are sealed in guns, and revolved for an hour in terrific heat. When all the inner moisture is changed to steam, the guns are unsealed and the steam explodes. Thus every food cell is blasted.

No other cooking process, we think, breaks up half so many food cells. No other process so fits these grains for food. And in no other form are these grains so inviting as these flaky, airy bubbles, crisp and fragile, with a nut-like taste.

## The Quaker Oats Company

Chicago



(1653)

Puffed  
Wheat

Puffed  
Rice

and Corn Puffs

Each 15c Except in Far West

## READER!

are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society.

Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the "ad" in the JOURNAL.

## WANTED, FOR SALE, AND RENT DEPARTMENT

Advertisements under this heading cost one dollar for four lines or less, and 35 cents for each additional line, each insertion. Payable in advance. Line holds eight ordinary words.

DRUG AND LIQUOR HABITS CURED. No suffering or danger. New treatment without delirium. Absolutely satisfactory results. Modern Sanitarium, established eighteen years. Close personal attention. RALPH SANITARIUM, 529 Highland Ave., Kansas City, Mo.

### College of Medicine



#### University of Illinois

Minimum admission requirements for entrance, fifteen units of work from an accredited High School and in addition two years in a recognized university or college, involving at least one year in college physics, biology, chemistry and six college hours in French or German.

For course of medical study, four years are required. Eligible students will receive the

degree of B. S. at the completion of the sophomore year. A greater measure of patriotic service can be given by physicians than in any other activity.

Collegiate year begins October 1st, 1917.

For information concerning course of study, fees, etc., address Secretary.

College of Medicine of the University of Illinois  
Box 51 Congress and Honore Streets, Chicago, Illinois

## Drug and Alcoholic Addictions Treated Exclusively

Our facilities for caring for this class of patients are unsurpassed. This sanitarium is conducted along high-grade ethical lines.

Fixed charge made to patient when accepted for treatment. No extras. Time required: Alcoholism, 3-7 days; Drug Addiction, 10-20 days. No Suffering. Booklet covering both subjects sent free on request.

## The Pine Sanitarium

Established 1900

1919 Prairie Ave., Chicago, Illinois  
Local and Long Distance Telephone, Calumet 4543



#### Resident Physician

James H. Appleman, M. D.  
CONSULTANTS

#### Surgeon

Gustav M. Blech, M. D.  
25 East Washington St.

#### Genito-Urinary

Frank Wieland, M. D.  
122 South Michigan Ave.

#### Internist

Walter B. Metcalf, M. D.  
25 East Washington St.

#### Electro-Therapy

Emil H. Grubbe, M. D.  
130 North State Street

#### Throat, Nose and Ear

Richard H. Street, M. D.  
25 East Washington St.

#### Pathologist

W. Henry Wilson, M. D.  
3129 Rhodes Ave.

#### Oculist

Carleton A. Harkness, M. D.  
29 East Madison St.



# LEDERLE'S POLLEN VACCINE

In the Prophylaxis and Treatment of

## HAY-FEVER

In 1915, LEDERLE'S POLLEN VACCINE was used by over 600 physicians for the prophylaxis and treatment of hay-fever. A clinical history blank was submitted to each physician and the results of the collected data are as follows:

1. Favorable results followed as a *prophylactic* against hay-fever in 83 *per cent* of the cases.
2. In the *treatment* of hay-fever favorable results followed in 89 *per cent* of the cases.
3. Marked asthmatic symptoms were associated with 55 per cent of the cases. The symptoms were relieved in 84.2 per cent of these cases.

During 1916, LEDERLE'S POLLEN VACCINE was employed by over 1,500 physicians with the following results:

1. Favorable results followed as a *prophylactic* in 80 *per cent* of the cases.
2. In the *treatment* of hay-fever favorable results were obtained in 91.7 *per cent* of the cases.
3. Marked asthmatic symptoms were associated with 53 per cent of the cases. These symptoms were successfully relieved in 78.5 per cent of the cases.

LEDERLE'S POLLEN VACCINE was used with favorable results in 40 states of the Union, from Maine to California, and as far away as Porto Rico.

The above results in the prophylaxis of hay-fever are based on the use of LEDERLE'S POLLEN VACCINE according to our original recommendation of 15 doses for the complete treatment.

*Literature will be sent to any physician upon request*

**LEDERLE ANTITOXIN LABORATORIES**

**SCHIEFFELIN & CO., Distributors**

**NEW YORK**

# THE RADIUM INSTITUTE

1604 Mallers Bldg., 59 East Madison Street

Corner Wabash Avenue, Telephone Randolph 5794

## CHICAGO

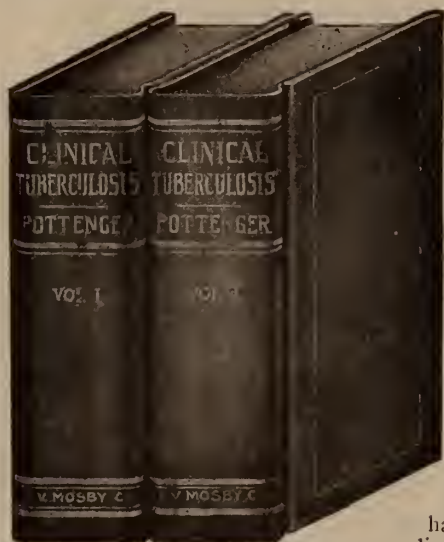
DR. FRANK E. SIMPSON, Director

**T**REATMENT of Malignant and Benign Growths with Radium, Post-Operative Prophylactic Radiations. Applicators for all purposes, including many of Special design. We desire to confer and cooperate with surgeons who wish to use Radium in inoperable cases.

A complimentary copy of *The Radium Quarterly* will be sent on request.

### COUNCIL

DR. F. A. BESLEY	DR. E. C. DUDLEY
DR. A. R. EDWARDS	DR. O. T. FREER
DR. M. HERZOG	DR. L. E. SCHMIDT
DR. G. F. SUKER	



## CLINICAL TUBERCULOSIS

PATHOLOGICAL ANATOMY, PATHOLOGICAL PHYSIOLOGY, DIAGNOSIS, PROGNOSIS, COMPLICATIONS AND TREATMENT

By FRANCIS M. POTTENGER, A. M., M. D., LL. D.

Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Professor of Diseases of the Chest, College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, California.

In two volumes of 1,400 pages, with original engravings, including photographs, line drawings, charts, color plates, etc. Sold only in sets. Price, per volume, \$6.00.


### A Monumental Work on Tuberculosis

This is not only a book for specialists on tuberculosis, but is a practical treatise on diagnosis of the chest and in fact a study of the human being who happens to have tuberculosis. It contains a broad discussion of the principles of internal medicine.

The first few chapters dealing with infections, their relation to childhood and childhood tuberculosis, particularly when one takes into consideration that all the methods of treatment are discussed from their physiological action, telling the physician what each will do and will not do, should make it worth while to all pediatricians.

The chapter on laboratory methods is an advance on all things written and should make it necessary that this be in the hands of all people who are trying to do accurate diagnostic work in tuberculosis. It is not a book alone for specialists in tuberculosis, but should be in the hands of general men because of its being on general medicine. *Sign the attached coupon and mail today.*

**C. V. MOSBY CO.—Medical Publishers—ST. LOUIS**

 Send for Complete Catalog of Medical Publications

Ill.  
Med. Jour.

C. V. MOSBY  
COMPANY  
St. Louis.

Gentlemen: Please send me one set (2 vols.) Pottenger's "Clinical Tuberculosis," for which I enclose my check for \$12.00, or you may charge to my account.

Name .....

Street .....

Town..... State.....



# Illinois Medical Journal

OFFICE OF PUBLICATION 3338 OGDEN AVENUE, CHICAGO

Vol. XXXII, No. 3

CHICAGO, SEPTEMBER, 1917

\$2.00 a Year

## CONTENTS

ORIGINAL ARTICLES	PAGE		PAGE
The Treatment of Catarrhal Deafness. <i>M. F. Arbuckle, M. D., E. St. Louis, Ill.</i> .....	153	Depressed Nasal Deformities Corrected by Bone Transplantation. <i>L. Ostrom, M. D., Rock Island, Illinois</i> ..	169
What Can the State Do to Prevent Blindness? <i>Willis O. Nance, M. D., Chicago</i> .....	155	The Radical Mastoid Operation; Its Terminations with Reference to Hearing and Suppuration. <i>Charles H. Long, M. D., Chicago</i> .....	171
A New Method of Dealing with the Nasal Septum. <i>John A. Cavanaugh, M. D., Chicago</i> .....	161	The Kronlein Operation with Report of Case. <i>Edward E. Edmondson, M. D., Mt. Vernon, Ill.</i> .....	175
Treatment of Membranous Cataract. <i>H. W. Woodruff, M. D., Joliet, Ill.</i> .....	164	Operation for Anterior Synechia with Report of Cases of Secondary Glaucoma and Staphyloma in Which It Was Used. <i>C. G. Darling, M. D., Chicago</i> .....	177
Primary Mastoiditis, with Report of Case. <i>Robert Sonnenschein, M. D., Chicago</i> .....	167	Atrophic Rhinitis. <i>W. G. Hatch, M. D., Rockford, Ill.</i> ..	178

(Continued on page 32)

Entered as Second-Class Matter August 28, 1913, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879.

## *The Johns Hopkins Number*

# Medical Clinics of North America

### *Clinic of Dr. Theodore C. Janeway*

Hodgkin's Disease with Extensive Skin Eruption.  
Postural Albuminuria.  
Diabetes Associated with Disturbances of the External Secretion of the Pancreas in a Syphilitic.

### *Clinic of Dr. Lewellys F. Barker*

Meningitis of Unknown Etiology.  
Fibrillation of Muscular Tissue:  
I. Atrial (Auricular) Fibrillation;  
II. Progressive Muscular Atrophy.

### *Clinic of Dr. Herman O. Mosenthal*

Dietetic Treatment of Diabetes.  
Essential Hypertension.

### *Clinic of Dr. Thomas B. Fletcher*

Acromegaly.  
Combined Scleroderma, Raynaud's Disease, and Chronic Arthritis.

### *Clinic of Dr. Louis Hamman*

Hypertension—Its Clinical Aspects (Seven Cases).  
Dermoid Cyst of the Mediastinum.  
Milroy's Disease.

### *Clinic of Dr. Thomas R. Brown*

Gastroptosis.  
Visceroptosis and Chronic Appendicitis.  
Medical After-Care of Patients after Abdominal Operations.

*The Medical Clinics of North America.* Issued serially, one octavo of 225 pages, illustrated, every other month (six numbers a year). Per Clinic Year (July to May): Cloth, \$14.00 net; Paper, \$10.00 net.

W. B. SAUNDERS COMPANY

Philadelphia and London

This Issue, 6,650 Copies

# Horlick's the Original Malted Milk

This is the package. Others are substitutes.



Palatable, agreeable and beneficial to infant, invalid and convalescent.

## Horlick's Malted Milk Co., Racine, Wis.

### Clinical Laboratory Analyses

The kind of clinical laboratory work that commands respect

Wassermann and other complement fixation tests - - - - \$5.00

Our technician is a pupil of Wassermann.

Autogenous Vaccines. In single vials or ampules - - - - \$5.00

Our technician trained under Michaelis of Berlin and Sir Almond Wright of London

Lange Colloidal Gold test of Spinal fluid - - - - - \$5.00

Our technician is a pupil of Lange.

Tissue Diagnoses. Frozen section, paraffin or celloidin - - \$5.00

Diagnosis by Dr. Maximilian Herzog

Know the Reputations and Training of Your Laboratory Technicians.

Accurate Analyses of All Secretions, Excretions and Body Fluids.

Mailing Containers on request.

### Laboratory of Pathology and Bacteriology

Dr. Meyer D. Moledetzky, Director

Eleventh (11th) Floor, Suite 1130 Marshall Field Annex Building  
25 East Washington Street

Phones Randolph 6552, 6553



# Stanolind Liquid Paraffin

Trade Mark Reg. U. S. Pat. Off.

(Medium Heavy)

Tasteless — Odorless — Colorless

## In Treating Hemorrhoids

**S**TANOLIND Liquid Paraffin, used regularly, very generally relieves hemorrhoids and fissure, even when of some years' standing.

Since these morbid conditions are usually the result of constipation, and are aggravated by straining, Stanolind Liquid Paraffin aids by rendering the intestinal contents less adhesive, by allaying irritation and thus by permitting the diseased tissues to become healed.

Where a contraindication for operative treatment exists, the use of Stanolind Liquid Paraffin in these conditions will frequently give relief from distressing symptoms and may even permit the parts to be restored to a condition where operative procedure may be postponed.

The *special advantage* of Stanolind Liquid Paraffin lies in the fact that its beneficial effects are not diminished by continual use, as is the case with almost any other laxative.

Stanolind Liquid Paraffin acts by lubrication and by adding bulk to the indigestible intestinal residue.

*A trial quantity with informative booklet will be sent on request.*

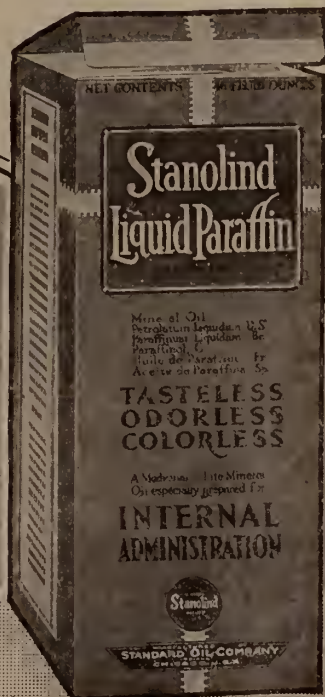
**Standard Oil Company**

(Indiana)

72 West Adams Street

Chicago, U. S. A.

75



## *An Efficient Sugar for Infant Feeding*

means maximum tolerance, assimilability, and gain in weight with minimum digestive disturbances and diarrhoea for the infant. This is why nearly every pediatricist prescribes

# MEAD'S DEXTRI-MALTOSE

(MALT SUGAR)

**in feeding formulae for infants' diet**

Let us send you samples and literature fully describing the simplicity of using Mead's Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

**MEAD JOHNSON & CO., EVANSVILLE, IND.**

There are many grades of crude drugs offered for sale on the drug market

*But—*

There is only one "best"

It takes the best grade of crude drug, the highest grade of workmanship, together with the most accurate and "time-tried" methods to make



**PITMAN-MOORE COMPANY, Chemists**  
INDIANAPOLIS, INDIANA



# HOYT'S GUM GLUTEN BAKED PRODUCTS DAINTY FLUFFS AND BISCUIT CRISPS

A summer substitute for  
Gluten bread. Easy to  
carry when away on trips  
or vacation.

For sale by agents every-  
where. Send for samples.

— THE —

**PURE GLUTEN FOOD CO.**

90 W. Broadway  
NEW YORK CITY



## Bran Food As You Want It

Here is a dish which for 20  
years has been a favorite  
morning dainty.

It is soft wheat rolled—a  
dish which meets a universal  
taste.

Into those flakes we now  
roll 25 per cent of bran. The  
bran is in flake form to make  
it doubly efficient.

Certainly no other bran  
food is today so widely ad-  
vised by physicians. And a  
food could not be better fitted  
to foster the bran habit.

## Pettijohn's

**Rolled Wheat—25% Bran**

A breakfast dainty whose flavory  
flakes hide 25 per cent unground  
bran.

**Pettijohn's Flour**—75 per cent  
fine patent flour with 25 per cent  
bran flakes. Use like Graham flour  
in any recipe.

Both sold in packages only.

(1649)

# Hay Fever

Successfully Treated with

## BACTERIAL VACCINES

Pollen irritation and breathing of the hot  
dust laden atmosphere favor the develop-  
ment of pyogenic bacteria in the respiratory  
tract which then becomes a primary factor of  
the disease.

Experience shows that the immunizing in-  
fluence of an appropriate bacterin will either  
cure the disease or so modify it that it causes  
but little distress. Use Sherman's No. 40.

Write for Literature.

MANUFACTURER  
OF  
BACTERIAL VACCINES

**G. H. SHERMAN, M.D.**  
*Detroit, Mich.*  
U.S.A.

**RESPIRAZONE** The Physician's First Thought in Hay Fever and Asthma  
 Samples to the Profession upon application  
**THE TILDEN COMPANY** MANUFACTURING PHARMACISTS AND CHEMISTS  
 NEW LEBANON, N. Y. ST. LOUIS, MO.

**THE Pennoyer**  
 Established 1867  
 Kenosha, Wis., between Chicago and Milwaukee on the North-Western R. R. Fine Health Resort and Sanitarium on Lake Michigan. Beautiful environment—a mile of lake shore. For illustrated prospectus address  
 N. A. Pennoyer, M. D.

**KALMERID CATGUT**  
 A Physiologically Correct Germicidal Suture  
 DAVIS & GECK, INC.  
 217-221 Duffield Street  
 Brooklyn, N.Y., U.S.A.

**DOCTOR:** It is our purpose to give to you on your orders, the best pharmaceuticals that the highest grade of crude drugs, pure chemicals and skilled workmanship, under experienced supervision, can produce.

When our man calls upon you, give him a few moments of your time. He will tell you more about what we are trying to do.

**G. D. SEARLE & CO.** Mfrs. of Fine Pharmaceuticals and Hypodermic Tablets  
 215-217-219 W. Ohio St. CHICAGO Telephone North 1704

## In DIARRHEA OF INFANTS

Three recommendations are made—

Stop at once the giving of milk.

Thoroughly clean out the intestinal tract.

Give nourishment composed of food elements capable of being absorbed with minimum digestive effort.

A diet that meets the condition is prepared as follows:

Mellin's Food	-	-	4 level tablespoonfuls
Water (boiled, then cooled)			16 ounces
(Composition—maltose, dextrins, proteins and alkaline salts)			
(Calories per fluidounce=6.2)			

Feed small amounts at frequent intervals

It is further suggested:—As soon as the stools lessen in number and improve in character, gradually build up the diet by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually given for the age of the infant; also that no milk fat be given until the baby has completely recovered.

**MELLIN'S FOOD COMPANY,**

**BOSTON, MASS.**



# MEDICAL DISCOVERIES OF THE WAR



**T**HE therapeutic measures developed, or made conspicuous so far by the war are two: the antiseptic treatment of wounds by the liberation of chlorine, made famous by Carrel and Dakin, and the protection of burned or denuded surfaces by films of wax-like material. An outstanding sanitary triumph has been the development, by Dakin and Dunham, of a chlorine-carrying tablet known as Halazone for the sterilization of contaminated water.

One of the most important medical developments coming out of the war is **Chlorazene**, Dakin's new Antiseptic. This powerful antiseptic, many times more efficient than phenol, is practically non-toxic, non-caustic, and does not coagulate the albumen of the tissues. It is less irritating and more stable than Dakin's Hypochlorite Solution. The uses of **Chlorazene** in surgery and general practice are legion. **Chlorazene Surgical Cream** and **Chlorazene Surgical Dusting Powder** have also met with remarkable success.

Both **Chlorazene** and **Parresine**, the improved, non-secret wax dressing for burns, have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, and have been adopted for use in the United States Navy.

The Abbott Laboratories are supplying to the medical profession in this country these products which are now being used with such notable success in the war hospitals of Europe.

## INTRODUCTORY OFFER

*Good in the United States Only*

To those physicians who have not used these products we will send for \$1.40, cash with order, delivery charges prepaid, 100 tablets of **Chlorazene** and one full-size half-pound cake of **Parresine**, with full directions for use. One hundred of the new Dakin-Dunham water sterilization tablets, known as **Halazone**, will be included for an additional 25 cents. One tablet sterilizes one quart of water and does not affect the taste.

Prices and literature on Dakin's new and powerful oil-soluble germicide, **Dichloramine-T**, and its solvents, **Chlorinated Eucalyptol**, Dakin, and **Chlorinated Paraffin Oil**, Dakin, will be sent on request. These products have just been placed on the market. Please mention this journal.

## THE ABBOTT LABORATORIES

CHICAGO - NEW YORK

SEATTLE

SAN FRANCISCO

LOS ANGELES

TORONTO

BOMBAY

We are pleased to announce to the Medical  
Profession the introduction of a

SMALL SIZE (6 oz.)

# Gray's Glycerine Tonic Comp.

(FORMULA DR. JOHN P. GRAY.)

The most important reasons for this new departure are briefly:

1. A convenient size for Rx.
2. To meet the conditions occasioned  
by the "high cost of living."
3. To insure proper filling of your  
prescriptions, and as a guard against  
Substitution.

The regular 16 oz. size will be continued as heretofore.  
We trust this innovation will be as cordially received by  
Physicians as has the 16 oz. size for the past 25 years.

THE PURDUE FREDERICK COMPANY,

135 CHRISTOPHER STREET, N. Y. CITY.

In the Treatment of

## Cystitis—Urethritis Pyelitis—Prostatitis—Bacilluria

### HELMITOL

ACTS AS

## *An Efficient Urinary Antiseptic*

Agreeable of Administration—Generally Well-Tolerated  
by the Gastro-Intestinal and Urinary Tract.

**Conveniently taken in Tablets, which readily dissolve.**

Supplied in 5 gr. tablets, bottles of 25 and 100, and in powder in ounces.

Samples and Literature supplied by

THE BAYER COMPANY, Inc.  
117 Hudson St., New York, N. Y.



# Chicago Pasteur Institute

26th YEAR

812 NORTH DEARBORN STREET

CHICAGO

FOR THE PREVENTIVE TREATMENT OF HYDROPHOBIA

ANTONIO LAGORIO, M.D. LL.D., Medical Director

G. B. BRUNO, M.D., Associate Director

FRANK A. LAGORIO, M.D., Associate Director

**Announcement**—When patients are unable to come to Institute, we can furnish physicians our course of Pasteur treatment by mail, in the State of Illinois. Telephone Superior 973.

*N. B.—We have no branches and the use of our name is unauthorized.*

Public notice is hereby given that on July 1, 1917, the Department of Registration and Education succeeded to the powers and duties vested by law in the State Board of Health. Hereafter, all examinations for licenses to practice embalming will be conducted under the jurisdiction of said Department.

The next meeting for the examination of applicants will be held in Chicago, October 11 and 12. Applications with the necessary filing fee of five dollars should be in the office of the Superintendent of Registration at Springfield not later than September 29.

F. C. DODDS,  
*Superintendent of Registration*

## DON'T USE TYPHOID VACCINE ALONE

## USE TYPHOID-PARATYPHOID VACCINE

For all immunizations, as it protects against both infections and costs no more than the typhoid vaccine alone.

### LIST No. 42

One Complete Immunization . . . . .	\$0.50
One 6 Mil (cc.) Bulk Package . . . . .	1.00
One 20 Mil (cc.) Bulk Package . . . . .	3.00
One Hospital Package (12 immunizations) . . . . .	3.50


## SWAN-MYERS COMPANY

Pharmaceutical and Biological Laboratories

INDIANAPOLIS

INDIANA, U. S. A.

GOVERNMENT LICENSE No. 58



**Mulford**  
**Serums and Serobacterins**  
 Essential in  
**War and Peace!**

**Diphtheria Antitoxin**  
 For the Prevention and Treatment of Diphtheria

**Tetanus Antitoxin**  
 For the Prevention and Treatment of Tetanus (Lock-jaw)

**Antipneumococcic Serum**  
 "Type I" and Polyvalent, for the Treatment of Pneumonia

**Antimeningitis Serum**  
 For the Treatment of Cerebrospinal Meningitis

**Antistreptococcic Serum**  
 For the Treatment of Streptococcic Infection

**Antidysenteric Serum**  
 For the Treatment of Bacillary Dysentery

**Antianthrax Serum**  
 For the Treatment of Human Anthrax

**Typho Serobacterin**  
 For the Prevention and Treatment of Typhoid Fever

**Influenza Serobacterin**  
 For the Prevention and Treatment of Colds

**Cholera Serobacterin**  
 For Preventive Immunization against Asiatic Cholera

**Neisser Serobacterin**  
 For the Treatment of Gonorrhea

***Mulford Products "Are the Standard"***

These Serums and Serobacterins are prepared by methods and are adjusted to standards, many of which originated in our Laboratories

WORKING BULLETINS AND LITERATURE MAILED ON REQUEST

**H. K. MULFORD COMPANY, Philadelphia, U. S. A.**  
 Manufacturing and Biological Chemists

29039



# Doctors!

If you see the "adv." in the Journal the advertiser is reliable.

Buy from our  
Advertisers

and make your Journal the best paying as well as the best reading Journal.

## The STORM Binder and Abdominal Supporter

PATENTED



Special High Kidney Belt

MEN, WOMEN, CHILDREN and BABIES

High and Low Operations, Hernia, Relaxed Sacro-iliac Articulations, Floating Kidney, Obesity, Pregnancy, Ptosis, Pertussis, etc.

Send for illustrated folder and Testimonials of Physicians. Mail Orders filled within Twenty-four Hours.

KATHERINE L. STORM, M. D.  
1541 Diamond St., PHILADELPHIA, PA.

## 50% Better Prevention Defense Indemnity

1. All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
  2. Or his estate is sued, whether the act or omission was his own
  3. Or that of any other person (not necessarily an assistant or agent),
  4. All such claims arising in suits involving the collection of professional fees,
  5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines,
  6. Defense through the court of last resort and until all legal remedies are exhausted.
  7. Without limit as to amount expended.
  8. You have a voice in the selection of local counsel.
  9. If we lose, we pay to amount specified, in addition to the unlimited defense.
  10. The only contract containing all the above features and which is protection per se.
- A Sample Upon Request

The  
MEDICAL PROTECTIVE COMPANY  
of Ft. Wayne, Indiana.

Professional  
Protection, Exclusively

**A  
NEW  
BOOK**



**SEND  
FOR  
IT**

**GRADWOHL  
BIOLOGICAL LABORATORIES**

928 North Grand Avenue  
ST. LOUIS, MO.

R. B. H. GRADWOHL, M. D., Director

**A** LIMITED number of copies of "**Chemico-Biological Diagnostics**" will be distributed to interested members of the profession upon request. (Coupon attached).

This book gives up to the minute facts about modern diagnosis, the scope of laboratory consultations, and the interpretations of Micro-Chemical findings.

On every Wassermann specimen we do the **Hecht-Gradwohl Test**; (no additional charge).

**New Blood Chemical Tests** which have proven so valuable in nephritis, diabetes mellitus, gout, and rheumatism.

**PASTEUR TREATMENT BY MAIL**

Course of eighteen treatments by special delivery mail daily.

*Write for literature on any phase of our work  
Slides, Containers, Fee Lists, etc., sent free*

**GRADWOHL BIOLOGICAL LABORATORIES**

928 N. Grand Ave., St. Louis, Mo.

Please send me your booklet "**Chemico-Biological Diagnostics**"

Name.....

City.....

State.....

**Send Your Specimens for Diagnosis**

TO THE

**Columbus Medical Laboratory**

ESTABLISHED 1893

**31 N. State Street - - Chicago, Illinois**

**WASSERMANN** and other serum tests.

**AUTOGENOUS VACCINES** prepared.

**TISSUE** from surgical cases for diagnosis.

Urine, Sputum and Blood tests.

Post Mortem and Medico Legal Advice.

Water, Food and Drug Analyses.

**Dr. Adolph Gerhrmann, Pres.**

**Central 2740**

**Nights, Oakland 6938**



## LISTERINE

A trustworthy, unirritating solution composed of volatile and non-volatile antiseptics; extensively and satisfactorily employed in dilution up to 25% as a wet dressing for surgical and accidental wounds.

## LISTERINE

Suitably diluted, applied by injection, douche or spray, often serves a useful purpose in catarrhs and conditions involving hyper-secretion from mucous surfaces. It is an efficient deodorizer.

## LISTERINE

On account of its boric and benzoic acid constituents, forms a suitable lotion in dermatitis following vaccination. In various cutaneous disorders, its use allays excessive itching or irritaton, and promotes cleanliness while exercising its anti-septic effect.

Descriptive literature on request

**Lambert Pharmacal Company**  
 Twenty-first and Locust Streets      St. Louis, Mo., U. S. A.

## RADIUM FOR RENT

BY

THE PHYSICIANS' RADIUM ASSOCIATION *of* CHICAGO

(Incorporated under the laws of Illinois: "Not for profit")

Any case, in which radium therapy is indicated, is provided for in our large assortment of radium applicators. Loaned on application from any responsible physician, case having first been passed on by us after receipt of adequate information. Certain cases may be sent to our office for treatment. Moderate rental fees charged. For further particulars address

THE PHYSICIANS' RADIUM ASSOCIATION

1104 Tower Bldg., 6 N. Michigan Ave.,

Telephones: Randolph 6897-6898

CHICAGO

Board of Directors: WILLIAM L. BAUM, M.D.; THOMAS J. WATKINS, M.D.; FREDERICK MENGE, M.D.; WALTER S. BARNES, M.D.; ALBERT WOELFEL, M.D. Managing Director: ALBERT WOELFEL, M.D.



## CHICAGO LABORATORY CLINICAL ANALYTICAL

Marshall Field Annex Bldg.  
25 E Washington St.

CHICAGO

Established 1904

Phone Randolph 3610

**M**ODERN equipment, combined with years of clinical and analytical experience, is at your service. Our reputation and names stand back of our work.

Serological Tests. Pathological Examination of Tissue. Autogenous Vaccines. Complement Fixation Test for Gonorrhea, Sputum, Smears, Pus, etc. Urinalysis, Complete Chemical and Microscopical. All work at moderate prices. Write for our fee table with instructions for sending specimens. Sterile containers and culture media on request. Prompt reports by mail, telephone or telegraph. During the summer season we urge the importance of an analysis of well waters and other sources of supply.

**RALPH W. WEBSTER, M.D., Ph.D.**

*Director of Chemical Department*

**THOMAS L. DAGG, M.D.**

*Director of Pathological Department*

**C. CHURCHILL CROY, M.D.**

*Director of Bacteriological Department*





# HORMOTONE

The Dynamogenic Hormone Tonic for

## Asthenic Conditions

HORMOTONE has been used with success in the treatment of many intractable cases. It is primarily indicated in adrenal insufficiency, but is also useful in functional impotence, sterility due to ovarian insufficiency, amenorrhea, dysmenorrhea and menopausal disorders.

The Fatigue Syndrome Yields to  
Hormotone as to No Other Agent

DOSE: *One or two tablets three times daily before meals.*

In Neurasthenia associated with High Blood Pressure use

**HORMOTONE WITHOUT PITUITARY**

**G. W. CARNRICK CO., 31 Sullivan Street, NEW YORK**



Trade Mark of  
The Society of Chemical  
Industry in Basle,  
Switzerland

*The premier digitalis*

is the digitalis which gives you  
results when others have failed

## DIGIFOLINE CIBA

will stand this test

according to the actual experiences  
of physicians

*Tablets and Ampoules*

Send for Literature,

**A. KLIPSTEIN & COMPANY**

New York



## What an enrichment!

What an addition to pure barley malt, milk and cocoa, the other constituents of "Ovaltine."

## Eggs

with all their native nutriment in its natural condition including the protein of the white; soluble, assimilable, digestible; as well as the fat and protein of the yolk with its valuable organic phosphorus and iron compounds molecularly unchanged.

## In convalescence

your patient will not tire of



# OVALTINE

For samples and complete analysis, write to

### THE WANDER COMPANY

Dept. 4, 23 North Franklin Street, Chicago

Established 1865 by Dr. A. Wander Co., Ltd., Berne, Switzerland. Ovaltine is used by leading European physicians and dietitians, also in recuperating bases of allied armies.



**KORA-KONIA**

## In the Hospital and Sanitarium

**KORA-KONIA** has proven its efficiency and dependability in a great variety of ways. Nowhere is this more marked than through its use in the Hospital and Sanitarium in the hands of the exact Doctor or the careful Nurse. As a treatment in the prevention of bed-sores and like irritations of the skin and for all cases where an efficient dusting powder of dependable uniformity and chemical correctness is required—it never disappoints.

**KORA-KONIA** is an aid in the treatment of contused, minor or slow-healing wounds, chafing, burns, scalds, abrasions, eczema, intertrigo, minor operations, dermatitis, as an after suture dressing and for moist or discharging surfaces.

**KORA-KONIA** is an absorbent, non-irritating, haemostatic, mildly astringent and antacid powder having definite mechanical and therapeutic value. Aids in granulation. Cooling and soothing.

Supplied by your Druggist—25 cents  
Test-it-yourself-package—Free by writing to

**THE HOUSE OF MENNEN NEWARK. N. J.**

# TYPHOID FEVER

---

PROPHYLAXIS.  
DIAGNOSIS.  
TREATMENT.

## Typhoid Vaccine, Prophylactic.

For protective inoculation against typhoid fever.

The immunizing power of this vaccine is fully established.

Bio. 427—3 bulbs; 3 doses.	Bio. 428—1 syringe; 3 doses.
*Bio. 426—3 syringes; 3 doses.	Bio. 429—Hospital package, 30 doses.
*Supplied on unspecified orders.	

Literature with each package.

## Typhoid Agglutometer.

For diagnosis of typhoid fever.

The Widal Test without the use of either a live culture or a microscope.

Two forms: Typhoid Agglutometer No. 1 and  
Typhoid Agglutometer No. 2.

See our catalogue, page 248.

Directions for use accompany each outfit.

## Typhoid Phylacogen.

For the treatment of typhoid fever.

We have case reports of hundreds of patients treated with this modern therapeutic agent. They afford conclusive proof of the value of this Phylacogen.

Bulbs of 10 mils (Cc.), one in a package.  
Bulbs of 1 mil (Cc.), five in a package.

Literature with each package.

Home Offices and Laboratories,  
Detroit, Michigan.

**Parke, Davis & Co.**



## FELLOWS' SYRUP

Differs from other preparations of the Hypophosphites. Leading Clinicians in all parts of the world have recognized this important fact. **HAVE YOU?**

**TO INSURE RESULTS,  
Prescribe the Genuine**

**R** Syr. Hypophos. Comp. **FELLOWS'**

**REJECT** < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL MANFG. CO. LTD.  
28. CHRISTOPHER ST.  
NEW YORK

### TUBERCULOSIS - ALBUQUERQUE, NEW MEXICO

Climatic Conditions Unsurpassed  
Altitude 5000 feet  
In the LAND OF SUNSHINE

Experienced Medical Supervision  
Trained Nurses in Constant Attendance  
All Approved Therapeutic Measures Employed

### The Murphey Sanatorium



A High-Class Institution for the Treatment of Tuberculosis.  
Forty Rooms—Ten with private bath—Thirty with bath between each two rooms.  
Every Room has a Private Sleeping Porch.  
Located in the midst of beautiful Mountain Scenery.

**Rates: \$18.50 to  
\$25.00 per week  
NO EXTRAS**

DESCRIPTIVE BOOKLET AND FULL INFORMATION MAILED ON REQUEST

**THE MURPHEY SANATORIUM,**  
W. T. MURPHEY, M. D.,  
MEDICAL DIRECTOR

MRS. HATTIE SOWER,  
SUP'T.

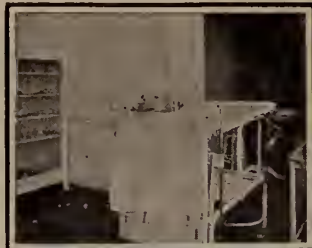
**Albuquerque, New Mexico**  
DAVID A. SPEAR, M. D.  
BACTERIOLOGIST



## THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILL.

is devoid of the "institutional atmosphere."  
It is designed and conducted to meet the  
requirements of patients who demand



**Privacy and  
Individual Attention**

*Special consideration is given  
to Quality of Service*

Rates \$25.00 to \$35.00 per week

H. V. PETTIT, Supt.

OTTAWA

ILLINOIS



## Chicago Fresh Air Hospital

(FOR TUBERCULOSIS)

*At Rogers Park, Chicago, Illinois*

Patients received in *all* stages of Pulmonary Con-  
sumption.

Private Rooms and Board, \$25.00 per week

Open Porch and two-bed Rooms, with Board, \$15.00.

**Tuberculin Treatment  
Artificial Pneumo-Thorax**

**DR. ETHAN A. GRAY,**

*Medical Superintendent.*

## THE POTTENGER SANATORIUM

MONROVIA, CALIFORNIA

**FOR DISEASES OF THE LUNGS AND THROAT**



A thoroughly equipped institution for the  
scientific treatment of tuberculosis. High  
class accommodations. Ideal all-year-  
round climate. Surrounded by orange  
groves and beautiful mountain scenery,  
45 minutes from Los Angeles.

F. M. POTTENGER, A.M., M.D. LL.D.,  
Medical Director.

J. E. POTTENGER, A.B., M.D., Assistant  
Medical Director and Chief of Laboratory.

GEORGE H. EVANS, M.D. San Francisco,  
Medical Consultant.

**For Particulars, Address THE POTTENGER SANATORIUM, Monrovia, California**  
LOS ANGELES OFFICE, 1100-1101 TITLE INSURANCE BUILDING, FIFTH AND SPRING STREETS



## EDWARD SANATORIUM

For the Treatment of Incipient Pulmonary Tuberculosis  
NAPERVILLE, ILLINOIS



Established 1907. Attractive surroundings. Large grounds. Open-air sleeping cottages and Infirmary with all appointments necessary for the comfort of the patients.

Modern hygienic-dietetic methods of treatment. Medical and laboratory facilities. Resident physicians and trained nurses.

Tuberculin Treatment and Artificial Pneumothorax in suitable cases

*For detailed information, rates and rules of admission, apply to*

CHICAGO TUBERCULOSIS INSTITUTE, 8 South Dearborn Street, Room 1212, CHICAGO, ILL.



On Main Line Chicago, Milwaukee & St. Paul Railway  
30 Miles West of Milwaukee

## Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

For Nervous and Mild Mental Diseases

Building New, Most Approved Fireproof Construction

ARTHUR W. ROGERS, M.D., Resident Physician in Charge  
LONG DISTANCE TELEPHONE

Built and equipped to supply the demand of the neurasthenic, borderline and undisturbed mental case for a high class home free from contact with the palpable insane, and devoid of the institutional atmosphere. Forty-one acres of natural park in the heart of the famous Wisconsin Lake Resort Region. Rural environment, yet readily accessible. The new building has been designed to encompass every requirement of modern sanitarium construction, the comfort and welfare of the patient having been provided for in every respect. The bath department is unusually complete and up-to-date. Number of patients limited, assuring the personal attention of the resident physician in charge.

Trains meet at Oconomowoc on request.

## The Norbury Sanatorium

JACKSONVILLE

---

ILLINOIS

Established by Dr. Frank P. Norbury, 1901

Incorporated and Licensed

“Maplewood” — “Maplecrest”

Capacity Forty Beds

PRIVATE RESIDENTIAL HOMES for the treatment of Nervous and Mental Disorders. Especial attention given to the treatment, by approved modern methods, of the Psychoneuroses, Exhaustion states and selected Psychoses and addiction cases.

Dr. FRANK P. NORBURY,  
Medical Director. (Late  
Allenist, State Board of Ad-  
ministration. Formerly  
Supt. Kankakee State Hos-  
pital.)

Dr. ALBERT H. DOLLEAR  
Superintendent (Late  
Clinical Asst., State Psycho-  
pathic Institute, Kankakee.  
Formerly Asst. Supt. Water-  
town State Hospital.)

Address all communications, THE NORBURY SANATORIUM, 806 South Daimond Street, JACKSONVILLE, ILLINOIS  
Springfield Office, Dr. FRANK P. NORBURY, 407 South Seventh Street, by appointment

# Kenilworth Sanitarium

(Established 1905)

**KENILWORTH, ILLINOIS**  
(C. & N.-W. Railway. Six miles north of Chicago)



All correspondence should be addressed to Kenilworth Sanitarium, Kenilworth, Illinois

Built and equipped for the treatment of nervous and mental diseases. Approved diagnostic and therapeutic methods. An adequate night nursing service maintained. Sound proof rooms with forced ventilation. Elegant appointments. Bath rooms en suite, steam heating, electric lighting, electric elevator.

## Resident Medical Staff

Ella Blackburn, M. D., Sherman Brown, M. D.,  
Sanger Brown, M. D.,  
Chicago Office: 59 East Madison Street  
Telephone: Randolph 5794. Consultation by appointment only



Established 1867

# BELLEVUE SANITARIUM

BATAVIA, ILLINOIS  
near CHICAGO

*For Nervous and Mental Diseases  
of Women Only*

Restful, homelike and accessible. Treatment modern,  
scientific and ethical.

TERMS MODERATE. WRITE FOR BOOKLET

# THE RIVERSIDE SANITARIUM

For Nervous and Mild Mental Diseases

SEPARATE DEPARTMENT FOR NON-  
MENTAL CASES  
SELECTED ALCOHOLIC CASES ACCEPTED

Located in the beautiful suburb of East Milwaukee

Beautiful apartments, single or en suite—  
private bath rooms—amusement hall—  
billiard room—gymnasium—sun parlors.

Full scientific equipment.



RATES UPON  
REQUEST

Address F. C. STUDLEY, M. D., Milwaukee

# Waukesha Springs Sanitarium

FOR THE CARE AND TREATMENT OF

NERVOUS DISEASES

BYRON M. CAPLES, M.D., Superintendent

Waukesha

::

Wisconsin



BUILDING ABSOLUTELY FIRE-PROOF



# NEURONHURST

Dr. W. B. Fletcher's Sanatorium



**For Treatment of Mental and Nervous Diseases, Including Legally Committed and Voluntary Cases**

Well equipped with all facilities for the care and treatment of all forms of mental and nervous diseases, inebriety, drug addiction and those requiring recuperation and rest. Gynecological department is in charge of skilled women physicians. All approved forms of Hydrotherapy, Balneotherapy, Massage, Swedish Movements, etc. All forms of Electrical Treatments. Phototherapy, High Frequency and X-Ray work. A strictly ethical institution. Correspondence with physicians invited. For particulars and terms, address:

**DR. MARY A. SPINK, Superintendent.** Long Distance Telephones **1140 E. Market St., INDIANAPOLIS**

## DR. SIDNEY D. WILGUS

Retiring Superintendent of Kankakee State Hospital, also former Superintendent of Elgin State Hospital,

### Begs to Announce

**that he has purchased a Sanitarium at Rockford, Ill. (The Ransom)**

and is prepared to give personal care and attention to mental and nervous cases and drug addictions. Modern features having been added, the equipment is qualified to give up-to-date treatment. Also tennis, croquet, boating, and other out-door exercises are prescribed. A nine-hole golf course is near by. Correspondence solicited, or, to save time, telephone: Long Distance, Rockford 3767, and reverse the charges. On request patients are met at any train with an automobile.

**Mail address, DR. SIDNEY D. WILGUS, Box 304, Rockford, Ill.**

Chicago Office. Thursday Mornings until 12 at Suite 1603, 25 E. Washington St.

And by appointment



ENTRANCE

WEST HOUSE

OFFICE AND BATH HOUSE

PSYCHOPATHIC HOSPITAL

GYMNASIUM

Established  
in 1884

## THE MILWAUKEE SANITARIUM

For Mental and Nervous Diseases

Wauwatosa,  
Wis.

Located at Wauwatosa (a suburb of Milwaukee) on C. M. & St. P. Ry., 2½ hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two lines street cars. Complete facilities and equipment as heretofore announced. (Psychopathic Hospital: Continuous baths, fireproof building, separate grounds. (West House: Rooms in suits with private baths. (Gymnasium and Recreation Building: Physical culture, "Zander" machines, shower baths. (Modern Bath House: Hydrotherapy, Electrotherapy, Mechanotherapy. (30 acres beautiful all, forest and lawn. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

**RICHARD DEWEY, A. M., M. D.**

**EUGENE CHANEY, A. M., M. D.**

**WILLIAM T. KRADWELL, M. D.**

CHICAGO OFFICE: Marshall Field Annex, 25 E. Washington Street, Room 1823. Wednesdays 1 to 3 P. M., (except in July and August) Tel. Centra 1163  
MILWAUKEE OFFICE: Goldsmith Building, Room 504. Consultation by appointment. Tel. Main 81.  
TELEPHONE SANITARIUM OFFICE: Milwaukee-Wauwatosa 16.



## The Cincinnati Sanitarium For Mental and Nervous Diseases

Incorporated 1873

A strictly modern hospital fully equipped for the scientific treatment of nervous and mental affections. Situation retired and accessible. For details write for descriptive pamphlet.

F. W. Langdon, M.D., Medical Director

B. A. Williams, M.D., Resident Physician

Emerson A. North, M.D., Resident Physician

H. P. COLLINS, Business Manager, Box No. 4, College Hill, Cincinnati, Ohio



ABSOLUTELY FIREPROOF BUILDING

LESS THAN THREE HOURS FROM CHICAGO

## Mud Baths

For the treatment of RHEUMATISM, Nervousness, Kidney, Liver and Skin Diseases, and all ailments requiring elimination and relaxation. Location beautiful; climate healthful; 80 acres of private grounds.

DR. AUGUSTUS S. GILLES, Medical Director

*Correspondence with physicians solicited*

For rates, literature and reservations, address

**Waukesha Moor (Mud) Bath Co.**  
WAUKESHA, WISCONSIN

## "BEVERLY FARM"

Home and School for Nervous and Backward Children

5 buildings, schools and gymnasium, 176 acres of land, 40 acres of timber, containing beautiful Camp Belle log cabin for recreation; separate buildings for boys and also children under 10 years of age. Thirty-six years experience. Consultations at home if desired. Publicity avoided. Address all communications to

**W. H. C. SMITH, M. D., Superintendent**  
GODFREY, MADISON CO., ILLINOIS

*"Beverly Farm" was awarded Grand Prize by Committee of Awards of the Louisiana Purchase Exposition*

## The Peoria Mud Baths

We insist that your patients can eliminate as freely and as effectually in Illinois as in any other State in the Union.

Strict ethical relations. Thoroughly equipped. Have had thousands of patients.

DR. T. W. GILLESPIE, Medical Supt.

**SULPHUR SPRINGS SANITARIUM**  
215-217 N. Adams St. Peoria, Illinois





# DR. WEIRICK'S SANITARIUM

FORMERLY DR. BROUGHTON'S SANITARIUM  
ESTABLISHED IN 1901

**For Opium, Morphine  
Cocaine and Other Drug  
Addictions, Including  
Alcohol and Special  
Nervous Cases**

Methods easy, regular, humane.  
Good heat, light, water, help, board,  
etc. Number limited to 44. A well  
kept home. Nervous-Mental De-  
partment in charge of Dr. W. L.  
Ransom. Address

**DR. G. A. WEIRICK**  
SUPERINTENDENT

**2007 South Main Street**

Phone 536  
Rockford - - - Illinois

## PETTEY & WALLACE 958 S. Fifth Street MEMPHIS, TENN. SANITARIUM



FOR THE TREATMENT  
OF

**Drug Addiction, Alcoholism,  
Mental and Nervous Diseases**

A quiet, home-like, private, high-  
class institution. Licensed. Strictly  
ethical. Complete equipment. Best  
accommodations.

Resident physician and trained  
nurses.

Drug patients treated by Dr.  
Petty's original method.

Detached building for mental  
patients.

# The Peoria Sanatorium

A private Sanatorium for the treatment of Nervous and Mental Diseases,  
by modern methods. Flowing Sulphur Spring. Licensed by the State.

**DRUG AND LIQUOR HABITS TREATED**

WRITE FOR BOOKLET

Director, DR. GEO. W. MICHELL

PHONE MAIN 225.

Address, 106 N. Glen Oak, PEORIA, ILL.

# LEUZARDER'S

## One Book System of Practical Book-keeping

A perfect system of Book-keeping, with **Cash Journal, Ledger, Etc., all in one Book.**

The most compact, simple, convenient and practical method of handling accounts which has ever been presented.

**Each book is complete in itself and carries a full set of instructions and examples.**

Especially arranged for the use of Dentists, Doctors, Surgeons, Lawyers, and others whose income is derived from personal service.

**PRICE SIX DOLLARS**

## B. T. LEUZARDER & CO.

New York Life Building,

Chicago, Ill.

## ILLINOIS STATE MEDICAL SOCIETY

### SECTION OFFICERS AND COMMITTEES

**SECTION ON SURGERY**  
John S. Nagel, Chairman.....Chicago  
H. A. Millard, Secretary.....Minonk

**SECTION ON MEDICINE**  
C. Martin Wood, Chairman.....Decatur  
S. R. Slaymaker, Secretary.....Chicago

**SECRETARIES' CONFERENCE**  
Flint Bondurant, President.....Calro

F. C. Gale, Secretary.....Pekin

**SECTION ON PUBLIC HEALTH AND HYGIENE**  
Grace Campbell, Chairman.....Chicago  
W. E. Park, Secretary.....Rockford

**SECTION ON EYE, EAR, NOSE AND THROAT**  
J. Sheldon Clark, Chairman.....Freeport  
Wesley H. Peck, Secretary.....Chicago

### COUNTY SOCIETIES

This list is corrected in accordance with the best information obtainable at the date of going to press.  
County Secretaries are requested to notify The Journal of any changes or errors.

**Adams County**  
J. L. Aleshire, Pres.....Plainville  
Elizabeth B. Ball, Secy.....Quincy

**Alexander County**  
J. W. Dunn, Pres.....Cairo  
R. E. Barrows, Secy.-Treas.....Cairo

**Bond County**  
W. T. Easley, Pres.....Greenville  
J. C. Wilson, Secy.....Greenville

**Boone County**  
Geo. Markley, Pres.....Poplar Grove  
H. E. Delavergne, Secy.....Belvidere

**Brown County**  
D. R. Peters, Pres.....Mt. Sterling  
E. C. Allworth, Secy.-Treas.....Mt. Sterling

**Bureau County**  
C. C. Barrett, Pres.....Princeton  
M. A. Nix, Secy.....Princeton

**Calhoun County**  
W. A. Skeel, Pres.....Kampsville  
J. H. Peisker, Secy.....Hardin

**Carroll County**  
G. E. Merchon, Pres.....Mt. Carroll  
R. B. Rice, Secy.-Treas.....Mt. Carroll

**Cass County**  
C. E. Soule, Pres.....Beardstown  
W. R. Blackburn, Secy.....Virginia

**Champaign County**  
J. H. Finch, Pres.....Champaign  
Cleaves Bennett, Secy.....Champaign

**Christian County**  
R. C. Danford, Pres.....Pana  
S. B. Herdman, Secy.....Taylorville

**Clark County**  
H. C. Houser, Pres.....Westfield  
L. J. Weir, Secy.....Marshall

**Clay County**  
C. E. Duncan, Pres.....Flora  
R. D. Finch, Secy.....Flora

**Clinton County**  
Orvil O'Neal, Pres.....Shattuc  
J. Q. Roane, Secy.....Carlyle

**Coles-Cumberland County**  
Wm. Smith, Pres.....Toledo  
R. H. Craig, Secy.-Treas.....Charleston

(Continued on page 33)



## ON THE FIRING LINE

Iodine has done wonders.

## IN AMERICA

"Surgodine S & D" has done **its** bit toward making new and better surgical records.

"Surgodine S & D" is THE Surgical Iodine in the experience of many of the leaders.

"Surgodine S & D" is ALL IODINE—no KI, glycerin, or other irritating ingredients.

## DO YOUR BIT

toward increasing your own surgical success by adopting this BEST OF ALL IODINES.

There is a sample in Baltimore for you.

## SHARP & DOHME

SINCE 1860

*Purveyors to Your Profession*

# The Standard Laboratories

## MANUFACTURING PHARMACISTS

**Q**UALITY, SERVICE and PRICE of drugs are necessary to success in the practice of medicine. Our products are manufactured from the purest drugs and chemicals obtainable, under the most skillful supervision, and the service is prompt. Our prices are the lowest consistent with quality.

### YOUR ORDERS SOLICITED

## 2626-2628 Shields Avenue - CHICAGO, ILL.

Phone Calumet 6090

# Loyola University

## School of Medicine

BENNETT MEDICAL COLLEGE

**O**FFERS a Five Year Course in Modern Scientific Medicine leading to the M. D. Degree, and a Six Year Course leading to the B. Sc. M. D. Degree. ¶ Individual instructions in large well equipped laboratories, and in fifteen metropolitan hospitals and dispensaries. ¶ Internships available for all graduates. ¶ Many opportunities in city for self help.

WRITE FOR CATALOGUE, HOSPITAL FOLDER  
AND "SELF-HELP FACTS"

1360 West Fulton Street

CHICAGO

## PRESCRIPTION SERVICE THAT SATISFIES

The service that firmly holds customers and constantly attracts new ones, is SERVICE that SATISFIES.

The facilities of

**THE WHITE-HAINES OPTICAL CO.**

are equal to the severest test.

ACCURACY is our first consideration.

Prompt Deliveries consistent with accuracy is our second consideration.

Our ability to handle a large volume of work promptly is worthy of your consideration.

We are Headquarters for Punktals, Kryptoks, Ultex one-piece, Naktic and Korectal (Trade Mark Reg.) lenses.

*Try our "SERVICE THAT SATISFIES"*

**THE WHITE-HAINES OPTICAL CO.**

COLUMBUS, O. INDIANAPOLIS, IND. SPRINGFIELD, ILL.



# Chicago College of Medicine and Surgery

**MEDICAL  
DEPARTMENT OF  
VALPARAISO  
UNIVERSITY**



**Main College Building and Willard Hospital**

**702-706  
SO. LINCOLN ST.  
CHICAGO, ILL.**

This College has an enrollment of 500 students. The Laboratory and Hospital facilities are abundant. The Faculty consists of men who have distinguished themselves as medical educators. The College is not burdened with debts and is therefore able to expend all of its income upon the courses of instruction. The Calendar year is divided into three semesters of four months each. The Fall semester begins on the last Tuesday in September. The Winter semester begins on the first Monday in February. The Summer semester begins on the first Monday in May.

*For catalogue or further information address*

**J. NEWTON ROE, Secretary**

**706 S. Lincoln St., Chicago, Ill.**

## Chicago Eye, Ear, Nose and Throat College

• A Post-Graduate School for Practitioners of Medicine

**235 W. Washington Street  
Chicago, Ill.**

**Catalogue on Application**

## Chicago Maternity Hospital and Training School for Nurses

**ACCOMMODATES 25 PATIENTS  
RATES: \$10.00 to \$25.00 PER WEEK**

Well infants cared for in nursery for \$5.00 per week.  
Training School for Obstetrical and Infants' nurses.

Address

**EFFA V. DAVIS, M.D., 2314 N. Clark St., Chicago**

## Home Training In Nursing



We offer a thorough extension course to beginners and also to practical nurses wishing to perfect themselves in the theory and science of nursing.

There is in every community a demand for competent nurses — women physically qualified and possessing natural ability, who for various reasons cannot leave home to get their training. Through the aid of the very thorough system of instruction used by this school for a period of sixteen years, we have trained hundreds of women who have "made good" as practical nurses. In fact our graduates adapt themselves to the inconveniences of private nursing more readily than the hospital-trained nurse. They are loyal to the home doctor, whose co-operation has made their success possible.

Reputable physicians are invited to investigate our methods and co-operate with us by sending the names of earnest women who in their estimation would make desirable applicants. Tuition fees very reasonable—small payment plan. Write for the Sixteenth Annual Announcement. Address

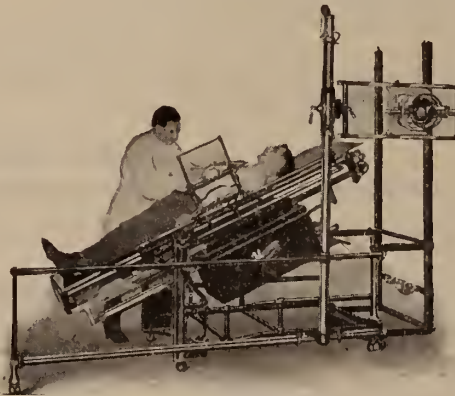
**Karen Esmann, Registrar  
CHICAGO SCHOOL OF NURSING  
116 S. Michigan Blvd., Chicago, Ill.**



—For Personal Efficiency

## Every Surgeon and Every Physician

should make available to himself the help of *Roentgen Diagnosis*. It is a duty he owes to the community which he serves, and is a measure of preparedness for possible emergency in these war times.



ONE MODEL OF VICTOR ROENTGEN APPARATUS

Besides utilizing the services of a reliable professional Roentgenologist, the physician and the surgeon should himself become somewhat of a *Roentgen Diagnostician*.

Every community is entitled to the best possible diagnostic service. There is no moral excuse nor legal extenuation for not having it.

The professional Roentgenologist, as a *Consulting Diagnostician*, is in position to be of invaluable aid to the Surgeon, the Internist, the General Practitioner, the Orthopedist, the Dentist, the Proctologist, the Urologist, the Gastro-Enterologist, the Ophthalmologist, the Otologist, the Rhinologist—every medical practitioner.

Catalog literature and clinical data pertaining to any phase of roentgenology, electro-medical or physical therapeutics, will be furnished on request—and without obligation.

## VICTOR ELECTRIC CORPORATION

*Manufacturers of Roentgen, Electro-Medical and Physical Therapeutic Apparatus*

CHICAGO  
236 S. Robey St.

CAMBRIDGE, MASS.  
66 Broadway

NEW YORK  
131 E. 23rd St.

*Sales offices and service stations in all important cities*



# INDEX TO ADVERTISERS

Abbott Laboratories.....	7
Bayer Company.....	8
Bellevue Sanitarium.....	22
Beverly Farm School.....	24
Carrnrick, G. W., Co.....	15
Chicago College of Medicine and Surgery.....	29
Chicago Eye, Nose & Throat College.....	29
Chicago Fresh Air Hospital.....	20
Chicago Laboratory.....	14
Chicago Maternity Hospital.....	29
Chicago Pasteur Institute.....	9
Chicago School of Nursing.....	29
Cincinnati Sanitarium.....	24
College of Medicine, Univ. of Ill.....	2
Columbus Medical Laboratory.....	12
Crittenton, Chas. N., Co.....	2
Edward Sanatorium.....	21
Fellows Medical Mfg. Co.....	19
Fletcher's Sanatorium.....	23
Gradwohl Biological Laboratories.....	12
Horlick's Malted Milk Co.....	2
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Laboratory of Pathology and Bacteriology.....	2
Lambert Pharmaceutical Company.....	13
Lederle Antitoxin Laboratory.....	35
Leuzarder & Co.....	26
Loyola University School of Medicine.....	11, 30
McIntosh, John, Co.....	34
Medical Protective Co.....	11
Mead, Johnson & Co.....	4
Mellier Drug Co.....	4
Mennen.....	17
Mellin's Food Co.....	6

Milwaukee Sanitarium.....	23
Mosby Co., C. V.....	36
Mueller & Co., V.....	25
Murphey Sanatorium.....	19
Norbury Sanitarium.....	21
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Parke, Davis & Co.....	18
Pennoyer Sanitarium.....	6
Peoria Mud Baths.....	24
Peoria Sanatorium.....	25
Petty & Wallace's Sanitarium.....	25
Phillips Co., Chas. H.....	32
Physicians' Radium Association.....	13
Pine Sanatorium.....	34
Pitman-Moore Co.....	4
Pottenger Sanatorium.....	20
Purdue, Frederick, Co.....	8
Pure Gluten Food Co.....	5
Quaker Oats Co.....	5, 33
Radium Institute.....	36
Ransom Sanitarium.....	23
Riverside Sanitarium.....	22
Saunders Co., W. B.....	front cover
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Sherman, G. H., M. D.....	5
Standard Laboratories.....	27
Standard Oil Co.....	3
Storm, Katherine L., M. D.....	11
Swan-Myers Co.....	9
Tilden Co., The.....	6
Victor Electric Co.....	30
Wander, Dr. A.....	16
Waukesha Moor (Mud) Bath Co.....	24
Waukesha Springs Sanitarium.....	22
Waukesha Pure Food Co.....	30
Weirick's Sanitarium.....	25
White-Haines Optical Co.....	28

## BUYER'S INDEX

### ABDOMINAL SUPPORTERS

Storm, Katherine L., M. D.....	11
--------------------------------	----

### AUTOMOBILES, ETC.

Standard Oil Co.....	3
----------------------	---

### FOOD

Horlick's Malted Milk Co.....	2
Mead, Johnson & Co.....	6
Mellin's Food Co.....	6
Pure Gluten Food Co.....	5
Quaker Oats.....	5, 33
Wander's Ovaltine.....	16
Waukesha Pure Food Co.....	30

### HOSPITAL

Chicago Fresh Air Hospital.....	20
Chicago Maternity Hospital.....	29

### INVESTMENTS AND INSURANCE

Medical Protective Co.....	11
----------------------------	----

### LABORATORY

Abbott Laboratories.....	7
Chicago Laboratory.....	14
Columbus Medical Laboratory.....	12
Gradwohl Biological Laboratories.....	12
Laboratory of Pathology and Bacteriology.....	2
Standard Laboratories.....	27
Swan-Myers Co.....	16

### MEDICAL BOOK PUBLISHERS

Saunders Co., W. B.....	front cover
Mosby Co., C. V.....	36

### MEDICAL SCHOOLS

Chicago College of Medicine and Surgery.....	29
Chicago Eye, Ear, Nose and Throat College.....	29
College of Medicine, Univ. of Ill.....	2
Loyola University School of Medicine.....	11, 30

### MUD BATHS

Peoria Mud Baths.....	24
Waukesha Moor (Mud) Bath Co.....	24

### NURSES

Chicago School of Nursing.....	29
--------------------------------	----

### PHARMACEUTICALS

Abbott Laboratories.....	7
Bayer Company.....	8
Carrnrick, G. W., Co.....	15
Crittenton, Chas. N., Co.....	2
Fellows Medical Mfg. Co.....	19
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Lederle Antitoxin Laboratory.....	35
Lambert Pharmacal Company.....	13
Mead, Johnson & Co.....	4
Mellier Drug Co.....	4
Mennen.....	17
Parke, Davis & Co.....	18
Phillips Co., Chas. H.....	32
Pitman-Moore Co.....	4
Purdue, Frederick, Co.....	8
Sherman's Bacterins.....	5
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Swan-Myers Co.....	9
Tilden Co., The.....	6

### SANATORIA & SANITARIA

Bellevue Sanitarium.....	22
Cincinnati Sanitarium.....	24
Edward Sanatorium.....	21
Fletcher's Sanatorium.....	23
Kenilworth Sanitarium.....	22
Norbury Sanitarium.....	21
Milwaukee Sanitarium.....	23
Murphey Sanatorium.....	19
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Pennoyer Sanitarium.....	6
Peoria Sanitarium.....	25
Petty & Wallace's Sanitarium.....	25
Pine Sanatorium.....	34
Pottenger Sanatorium.....	20
Radium Institute.....	36
Ransom Sanitarium.....	23
Riverside Sanitarium.....	22
Waukesha Springs Sanitarium.....	22
Weirick's Sanitarium.....	25

### SURGICAL INSTRUMENTS

McIntosh, John, Co.....	34
Mueller & Co., V.....	30
Victor Electric Co.....	30

IN PLACE OF OTHER ALKALIES USE

# Phillips' Milk of Magnesia

"THE PERFECT ANTACID"

For Correcting Hyperacid Conditions—Local or Systemic. Vehicle for Salicylates, Iodides, Balsams, Etc.

Of Advantage in Neutralizing the Acid of Cows' Milk for Infant and Invalid feeding.

## Phillips' Phospho-Muriate of Quinine

Compound

NON-ALCOHOLIC TONIC AND RECONSTRUCTIVE

With Marked Beneficial Action Upon the Nervous System. To be relied Upon Where a Deficiency of the Phosphates is Evident.

THE CHAS. H. PHILLIPS CHEMICAL CO.  
NEW YORK LONDON

FOR SALE—\$2,000 unopposed practice, in Southern Illinois for price of drugs and office equipment, about \$250. Will sell or rent property. Address, Dr. J. S. Cleland, Swanwick, Ill.

### DO YOU KNOW OF ANY CONTESTED

insurance claims? Our bureau renders its clients expert service in securing policyholders and beneficiaries holding health and accident policies satisfactory adjustment of disputed claims. Our work is conducted through the medical profession. Complete details regarding our system sent upon request to Dr. W. E. Magruder, Med. Dir., Nat. Investigation Bureau, 924 Madison Ave., Baltimore, Md. KK

## CONTENTS—Continued

### ORIGINAL ARTICLES.

Diagnosis of Acute Mastoiditis and Indications for operation. A. Edward Sherman, M. D., Aurora, Ill...	179
The Interpretation of the Findings of the Transillumina- tor. Wm. G. Reeder, M. D., Chicago.....	181
How the Eye and Ear Service in General Hospitals Can Be Improved. Frank Allport, M. D., Chicago.....	182
The Treatment of Vitreous Opacities. Wesley Hamilton Peck, M. D., Chicago.....	186
The Importance of After-Treatment of the Tonsillar Fossa During the Secondary Period Following Ton- sillectomy. C. F. Burkhardt, M. D., Effingham, Ill...	188
Some Observations on the Decompression Operation on the Hypophysis by the Nasal Route. Otto J. Stein, M. D., Chicago.....	192
Management of Malignant Diseases of the Upper Re- spiratory Tract. Joseph C. Beck, M. D., Chicago.....	194

### EDITORIAL.

Drafting Doctors.....	205
Another Imposition.....	206
Members of the Society in the Army Service.....	206
Beg Your Pardon!.....	206
War Meeting for Health Officers.....	207
Some Observations During the Recent Examination of Conscripted Men for the Army.....	207
Army Roentgenologists.....	207

### CORRESPONDENCE.

Physicians' Leases.....	208
What the Government Asks of the Press.....	208

### PUBLIC HEALTH.

New State Rules for Control of Pulmonary Tuberculosis.	209
Progress in Medical Licensure in Illinois.....	210
Divisional Organization of the State Department of Health	210

### SOCIETY PROCEEDINGS.

Cook County:	
Chicago Ophthalmological Society.....	211, 221
Chicago Laryngological and Otological Society.....	218
Macoupin County.....	223
Ogle County.....	223
Personals.....	223
News Notes.....	225
Marriages.....	226
Deaths.....	226
Book Notices.....	227



Cook County  
 Chas. E. Humiston, Pres.....Chicago  
 J. V. Fowler, Secy.....Chicago  
 Crawford County  
 A. G. Brooks, Pres.....Stoy  
 C. E. Price, Secy.....Robinson  
 DeKalb County  
 Paul E. N. Greeley, Pres.....Waterman  
 J. B. Hagey, Secy.....DeKalb  
 De Witt County  
 J. M. Wilcox, Pres.....Clinton  
 S. L. Thorpe, Secy-Treas.....Clinton  
 Douglas County  
 Floyd C. Phillips, Pres.....Arthur  
 Walter C. Blaine, Secy.....Tuscola  
 Du Page County  
 (Affiliated with Cook County)  
 Edgar County  
 Wm. A. Buchanan, Pres.....Paris  
 George H. Hunt, Secy.....Paris  
 Edwards County  
 W. E. Buxton, Pres.....West Salem  
 R. L. Moter, Secy.....Albion  
 Effingham County  
 Frank W. Goodell, Pres.....Effingham  
 F. Buckmaster, Secy.....Effingham  
 Fayette County  
 L. L. Morey, Pres.....Vandalia  
 Mark Greer, Secy.....Vandalia  
 Franklin County  
 Wm. H. Smith, Pres.....Benton  
 Edgar Austin, Secy.....Benton  
 Fulton County  
 J. C. Simmons, Pres.....Canton  
 Gallatin County  
 J. W. Bowling, Pres.....Shawneetown  
 A. B. Capel, Secy.....Shawneetown  
 Greene County  
 O. L. Edwards, Pres.....Roodhouse  
 L. O. Frech, Secy-Treas.....White Hall  
 Grundy County  
 Roscoe Whitman, Pres.....Morris  
 F. C. Bowker, Secy.....Morris  
 Hamilton County  
 E. S. Hall, Pres.....McLeansboro  
 P. M. Nation, Secy.....McLeansboro  
 Hancock County  
 Blair Kelley, Pres.....Ferris  
 S. M. Parr, Secy.....Carthage  
 Hardin County  
 W. J. J. Paris, Pres.....Rosiclare  
 F. A. Jones, Secy.....Rosiclare  
 Henderson County  
 W. J. Emerson, Pres.....Carman  
 J. P. Riggs, Secy.....Media  
 Henry County  
 Chas. F. Young, Pres.....Geneseo  
 P. J. McDermott, Secy.....Kewanee  
 Iroquois-Ford District  
 O. O. Hall, Pres.....Milford  
 W. L. Cottingham, Secy.....Paxton  
 Jackson County  
 W. A. Brandon, Pres.....Carbondale  
 H. G. Horstman, Secy.....Murphysboro  
 Jasper County  
 John Hamilton, Pres.....Bogota  
 James P. Prestley, Secy-Treas.....Newton  
 Jefferson County  
 E. E. Edmondson, Pres.....Mt. Vernon  
 Andy Hall, Secy.....Mt. Vernon  
 Jersey County  
 H. R. Bohannan, Pres.....Jerseyville  
 H. F. Threkeld, Secy.....Jerseyville  
 Jo Daviess County  
 U. S. G. Keller, Pres.....Warren  
 T. J. Stafford, Secy.....Stockton  
 Johnson County  
 C. D. Nobles, Pres.....Buncome  
 H. W. Walker, Secy.....Grantsburg  
 Kane County  
 A. E. Diller, Pres.....Aurora  
 L. J. Hughes, Secy-Treas.....Elgin  
 Kankakee County  
 C. W. Geiger, Pres.....Kankakee  
 E. S. Hamilton, Secy-Treas.....Kankakee  
 Kendall County  
 R. A. Schaefer, Pres.....Plano  
 Robt. McCelland, Secy.....Yorkville  
 Knox County  
 A. C. Keener, Pres.....Altoona  
 G. S. Bower, Secy.....Galesburg  
 Lake County  
 John P. O'Neil, Pres.....Highland Park  
 C. S. Ambrose, Secy-Treas.....Waukegan  
 La Salle County  
 R. C. Fullenweider, Pres.....La Salle  
 E. E. Perisho, Secy.....Streator



# The Finest Oat Food of the Ages

The evidence is that Quaker Oats is the finest oat food of the ages.

All the world over it today outsells any other brand. It is the final choice of millions.

That is because of the flavor. Not an added flavor, but the flavor of the full-grown oat.

No puny grains, starved and insipid, are used in Quaker Oats. A bushel of choice oats, because of this selection, yields only ten pounds of Quaker Oats.

Yet this luxury grade costs no extra price, because of our facilities.

# Quaker Oats

*12c and 30c per package in United States and Canada, except in Far West and South where high freights may prohibit*

**The Quaker Oats Company**  
Chicago

(1640)

## PERSONAL SERVICE

*For Owners and Prospective  
Buyers of*

## X-Ray Equipment

The special attention of all users of Electro-Medical Apparatus is directed to the John McIntosh Company, of Chicago, Milwaukee and St. Louis.

### Service

By service, we mean that any user of apparatus presented by the VICTOR ELECTRIC CORPORATION is entitled to the service of the John McIntosh Company.

Our lines cover everything in Electro-Medical Apparatus for the Physician, for the Hospital, and for the X-Ray Laboratory. If you are in need of information or service, write to the point nearest you.

At these offices you will be able to secure, in addition to Electro-Medical Apparatus, all classes of supplies used in X-Ray Laboratories, such as plates, developing materials, etc.

### JOHN McINTOSH COMPANY

30 E. Rando'ph Street  
CHICAGO

Marina Bldg., 306 N. Grand Ave. Merchants & Mfg's Bank Bldg.  
ST. LOUIS MILWAUKEE

## WANTED, FOR SALE, AND RENT DEPARTMENT

Advertisements under this heading cost one dollar for four lines or less, and 25 cents for each additional line, each insertion. Payable in advance. Line holds eight ordinary words.

DRUG AND LIQUOR HABITS CURED. No suffering or danger. New treatment without delirium. Absolutely satisfactory results. Modern Sanitarium, established eighteen years. Close personal attention. RALPH SANITARIUM, 529 Highland Ave., Kansas City, Mo.

### College of Medicine



#### University of Illinois

Minimum admission requirements for entrance, fifteen units of work from an accredited High School and in addition two years in a recognized university or college, involving at least one year in college physics, biology, chemistry and six college hours in French or German.

For course of medical study, four years are required. Eligible students will receive the

degree of B. S. at the completion of the sophomore year. A greater measure of patriotic service can be given by physicians than in any other activity.

Collegiate year begins October 1st, 1917.

For information concerning course of study, fees, etc., address Secretary.

College of Medicine of the University of Illinois  
Box 51 Congress and Honore Streets, Chicago, Illinois

## Drug and Alcoholic Addictions Treated Exclusively

Our facilities for caring for this class of patients are unsurpassed. This sanitarium is conducted along high-grade ethical lines.

Fixed charge made to patient when accepted for treatment. No extras. Time required: Alcoholism, 3-7 days; Drug Addiction, 10-20 days. No Suffering. Booklet covering both subjects sent free on request.

## The Pine Sanitarium

Established 1900

1919 Prairie Ave., Chicago, Illinois  
Local and Long Distance Telephone, Calumet 4543



#### Resident Physician

James H. Appleman, M. D.  
CONSULTANTS

#### Surgeon

Gustav M. Blech, M. D.  
25 East Washington St.

#### Genito-Urinary

Frank Wieland, M. D.  
122 South Michigan Ave.

#### Internist

Walter B. Metcalf, M. D.  
25 East Washington St.

#### Electro-Therapy

Emil H. Grubbe, M. D.  
130 North State Street

#### Throat, Nose and Ear

Richard H. Street, M. D.  
25 East Washington St.

#### Pathologist

W. Henry Wilson, M. D.  
3129 Rhodes Ave.

#### Oculist

Carleton A. Harkness, M. D.  
29 East Madison St.



# LEDERLE'S POLLEN VACCINE

In the Prophylaxis and Treatment of

## HAY-FEVER

In 1915, LEDERLE'S POLLEN VACCINE was used by over 600 physicians for the prophylaxis and treatment of hay-fever. A clinical history blank was submitted to each physician and the results of the collected data are as follows:

1. Favorable results followed as a *prophylactic* against hay-fever in 83 *per cent* of the cases.
2. In the *treatment* of hay-fever favorable results followed in 89 *per cent* of the cases.
3. Marked asthmatic symptoms were associated with 55 per cent of the cases. The symptoms were relieved in 84.2 per cent of these cases.

During 1916, LEDERLE'S POLLEN VACCINE was employed by over 1,500 physicians with the following results:

1. Favorable results followed as a *prophylactic* in 80 *per cent* of the cases.
2. In the *treatment* of hay-fever favorable results were obtained in 91.7 *per cent* of the cases.
3. Marked asthmatic symptoms were associated with 53 per cent of the cases. These symptoms were successfully relieved in 78.5 per cent of the cases.

LEDERLE'S POLLEN VACCINE was used with favorable results in 40 states of the Union, from Maine to California, and as far away as Porto Rico.

The above results in the prophylaxis of hay-fever are based on the use of LEDERLE'S POLLEN VACCINE according to our original recommendation of 15 doses for the complete treatment.

*Literature will be sent to any physician upon request*

**LEDERLE ANTITOXIN LABORATORIES**

**SCHIEFFELIN & CO., Distributors**

**NEW YORK**

# THE RADIUM INSTITUTE

1604 Mallers Bldg., 59 East Madison Street

Corner Wabash Avenue, Telephone Randolph 5794

## CHICAGO

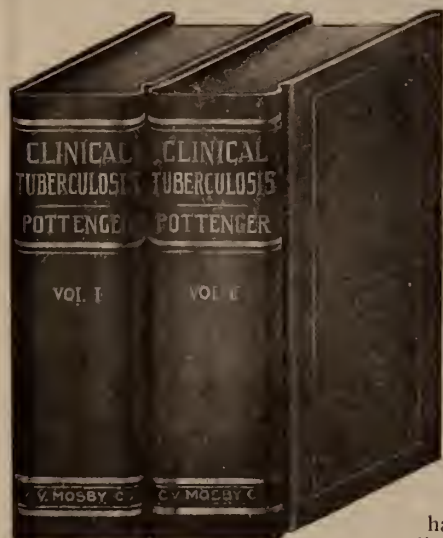
DR. FRANK E. SIMPSON, Director

**T**REATMENT of Malignant and Benign Growths with Radium, Post-Operative Prophylactic Radiations. Applicators for all purposes, including many of Special design. We desire to confer and cooperate with surgeons who wish to use Radium in inoperable cases.

A complimentary copy of The Radium Quarterly will be sent on request.

### COUNCIL

DR. F. A. BESLEY	DR. E. C. DUDLEY
DR. A. R. EDWARDS	DR. O. T. FREER
DR. M. HERZOG	DR. L. E. SCHMIDT
DR. G. F. SUKER	



## CLINICAL TUBERCULOSIS

PATHOLOGICAL ANATOMY, PATHOLOGICAL PHYSIOLOGY, DIAGNOSIS, PROGNOSIS, COMPLICATIONS AND TREATMENT

By FRANCIS M. POTTENGER, A. M., M. D., LL. D.

Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Professor of Diseases of the Chest, College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, California.

In two volumes of 1,400 pages, with original engravings, including photographs, line drawings, charts, color plates, etc. Sold only in sets. Price, per volume, \$6.00.


### A Monumental Work on Tuberculosis

This is not only a book for specialists on tuberculosis, but is a practical treatise on diagnosis of the chest and in fact a study of the human being who happens to have tuberculosis. It contains a broad discussion of the principles of internal medicine.

The first few chapters dealing with infections, their relation to childhood and childhood tuberculosis, particularly when one takes into consideration that all the methods of treatment are discussed from their physiological action, telling the physician what each will do and will not do, should make it worth while to all pediatricians.

The chapter on laboratory methods is an advance on all things written and should make it necessary that this be in the hands of all people who are trying to do accurate diagnostic work in tuberculosis. It is not a book alone for specialists in tuberculosis, but should be in the hands of general men because of its being on general medicine. Sign the attached coupon and mail today.

**C. V. MOSBY CO.—Medical Publishers—ST. LOUIS**

 Send for Complete Catalog of Medical Publications

III.  
Med. Jour.

C. V. MOSBY  
COMPANY  
St. Louis.

Gentlemen: Please send me one set (2 vols.) Pottenger's "Clinical Tuberculosis," for which I enclose my check for \$12.00, or you may charge to my account.

Name .....

Street .....

Town..... State.....





**Stanolind**  
Trade Mark Reg. U. S. Pat. Off.  
**Liquid Paraffin**  
(Medium Heavy)  
*Tasteless—Odorless—Colorless*

## During Pregnancy

**S**TANOLIND Liquid Paraffin is an admirable laxative for use during pregnancy. It produces no irritation of the bowel, has not the slightest disturbing influence upon the uterus, and no effect upon the fetus.

The regular use of Stanolind Liquid Paraffin in the later months of pregnancy is an effective means of avoiding some of the serious dangers attending the parturient state because of sluggish bowel action.

Stanolind Liquid Paraffin counteracts to a definite extent an unfortunate dietetic effect on the intestine in this manner; the concentrated diet of our modern civilized life contains so little indigestible material that the residue is apt to form a pasty mass which tends to adhere to the intestinal wall. Stanolind Liquid Paraffin modifies this food residue, and thus tends to render the mass less adhesive.

Stanolind Liquid Paraffin is mechanical in action, lubricating in effect. Its *suavity* is one of the reasons why increase of dose is never needful after the proper amount is once ascertained.

*A trial quantity with informative  
booklet will be sent on request.*

**Standard Oil Company**

(Indiana)

72 West Adams Street  
CHICAGO, U. S. A.

## *An Efficient Sugar for Infant Feeding*

means maximum tolerance, assimilability, and gain in weight with minimum digestive disturbances and diarrhoea for the infant. This is why nearly every pediatricist prescribes

# MEAD'S DEXTRI-MALTOSE

(MALT SUGAR)

**in feeding formulae for infants' diet**

Let us send you samples and literature fully describing the simplicity of using Mead's Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

**MEAD JOHNSON & CO., EVANSVILLE, IND.**

There are many grades of crude drugs offered for sale on the drug market

*But—*

There is only one "best"

It takes the best grade of crude drug, the highest grade of workmanship, together with the most accurate and "time-tried" methods to make



**PITMAN-MOORE COMPANY, Chemists**  
INDIANAPOLIS, INDIANA



# HOYT'S GUM GLUTEN BAKED PRODUCTS DAINTY FLUFFS AND BISCUIT CRISPS

A summer substitute for  
Gluten bread. Easy to  
carry when away on trips  
or vacation.

For sale by agents every-  
where. Send for samples.

— THE —

**PURE GLUTEN FOOD CO.**

90 W. Broadway  
NEW YORK CITY

# Hay Fever

Successfully Treated with

## BACTERIAL VACCINES

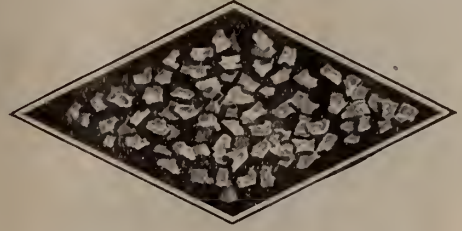
Pollen irritation and breathing of the hot  
dust laden atmosphere favor the develop-  
ment of pyogenic bacteria in the respiratory  
tract which then becomes a primary factor of  
the disease.

Experience shows that the immunizing in-  
fluence of an appropriate bacterin will either  
cure the disease or so modify it that it causes  
but little distress. Use Sherman's No. 40.

Write for Literature.

MANUFACTURER  
OF  
BACTERIAL VACCINES

**G. H. SHERMAN, M.D.**  
*Detroit, Mich.*  
U.S.A.



# Flake Bran

## Hidden in a Famous Breakfast Dainty

Pettijohn's is soft wheat,  
flaked like Quaker Oats. For  
many years it has been a favor-  
ite morning dish.

Now it is made with 25 per  
cent bran. And the bran is in  
flake form, to make it doubly  
efficient.

The result is a bran dish wel-  
comed by all, and of which peo-  
ple never tire. You will find, we  
think, no other bran food which  
so meets requirements.

# Pettijohn's

**Rolled Wheat—25% Bran**

A breakfast dainty whose flavory  
flakes hide 25 per cent unground bran.

**Pettijohn's Flour—75 per cent fine  
patent flour with 25 per cent bran flakes.**  
Use like Graham flour in any recipe.

• Both sold in packages only.

(1650)

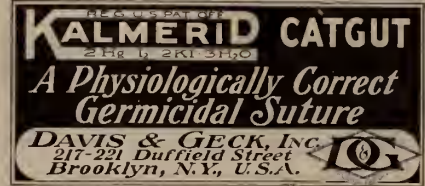
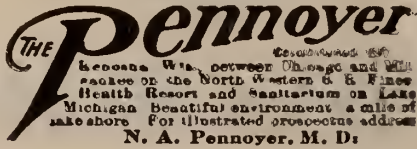
# RESPIRAZONE The Physician's First Thought in Hay Fever and Asthma

Samples to the Profession upon application

**THE TILDEN COMPANY** MANUFACTURING PHARMACISTS AND CHEMISTS

NEW LEBANON, N. Y.

ST. LOUIS, MO.



**DOCTOR:** It is our purpose to give to you on your orders, the best pharmaceuticals that the highest grade of crude drugs, pure chemicals and skilled workmanship, under experienced supervision, can produce.

When our man calls upon you, give him a few moments of your time. He will tell you more about what we are trying to do.

**G. D. SEARLE & CO.** Mfrs of Fine Pharmaceuticals and Hypodermic Tablets  
215-217-219 W. Ohio St. CHICAGO Telephone North 1704

## Special INFANT FEEDING Malnutrition-Marasmus-Atrophy

MELLIN'S FOOD	} Analysis :	Fat	.49
4 level tablespoonfuls		Protein	2.28
SKIMMED MILK		Carbohydrates	6.59
8 fluidounces		Salts	.58
WATER	}	Water	90.06
8 fluidounces			100.00

The principal carbohydrate in Mellin's Food is maltose, which seems to be particularly well adapted in the feeding of poorly nourished infants. Marked benefit may be expected by beginning with the above formula and gradually increasing the Mellin's Food until a gain in weight is observed. Relatively large amounts of Mellin's Food may be given, as maltose is immediately available nutrition. The limit of assimilation for maltose is much higher than other sugars, and the reason for increasing this energy-giving carbohydrate is the minimum amount of fat in the diet made necessary from the well-known inability of marasmic infants to digest enough fat to satisfy their nutritive needs.

MELLIN'S FOOD COMPANY,

BOSTON, MASS.



# Medical Victories



**T**HE remarkable work of Dakin, Carrel, Dunham, Daufresne, Sandfort and others in meeting the medical exigencies of the great war has attracted world-wide attention.

The Abbott Laboratories has taken the lead in supplying to the medical profession of this country the products developed by these men and used with such success in the war hospitals of Europe. This evidence of initiative and progress displayed by The Abbott Laboratories in supplying these new preparations, has met with the approval and appreciation of the medical profession.

Notable among the new products thus developed are:

**CHLORAZENE** (para-toluene-sodiumsulphochloramide), Dakin's new synthetic, water-soluble antiseptic. This remarkable antiseptic is rapidly replacing the hypochlorites because of its greater stability and convenience. **CHLORAZENE** is in use in the United States Navy and has been ordered by the United States Army.

**CHLORAZENE SURGICAL CREAM** and **CHLORAZENE SURGICAL POWDER** are more recent additions to the Chlorazene family and have already met with decided success. The Surgical Cream is warmly praised by Carrel and is used by him and his associates in The Rockefeller Institute.

**DICHLORAMINE-T** (para-toluene-sulphondichloramine), Dakin's latest oil-soluble antiseptic, reported in the "Journal of the American Medical Association," has attracted the earnest attention of the highest authorities in medicine and surgery and promises to add much to the efficiency of prophylaxis and surgery.

**HAIAZONE**, the new Dakin-Dunham Water Sterilization Tablet, reported in the "British Medical Journal," seems to solve the perplexing problem of securing an effective and pleasant disinfectant in stable tablet form for use in sterilizing drinking water.

**PARRESINE** was the first non-secret, Council-passed wax-dressing offered to the medical profession in this country for the treatment of burns. It has been used by physicians, hospitals and industrial firms with great success.

*Send for prices and literature on these epoch-making preparations*

Ask your druggist to stock them for your convenience or send your order direct to—

**THE ABBOTT LABORATORIES**  
CHICAGO - NEW YORK

SEATTLE

SAN FRANCISCO

LOS ANGELES

TORONTO

BOMBAY

We are pleased to announce to the Medical  
Profession the introduction of a

SMALL SIZE (6 oz.)

# Gray's Glycerine Tonic Comp.

(FORMULA DR. JOHN P. GRAY.)

The most important reasons for this new departure are briefly:

1. A convenient size for Rx.
2. To meet the conditions occasioned  
by the "high cost of living."
3. To insure proper filling of your  
prescriptions, and as a guard against  
Substitution.

The regular 16 oz. size will be continued as heretofore.  
We trust this innovation will be as cordially received by  
Physicians as has the 16 oz. size for the past 25 years.

THE PURDUE FREDERICK COMPANY,

135 CHRISTOPHER STREET, N. Y. CITY.

In the Treatment of

## Cystitis—Urethritis Pyelitis—Prostatitis—Bacilluria

### HELMITOL

ACTS AS

## *An Efficient Urinary Antiseptic*

Agreeable of Administration—Generally Well-Tolerated  
by the Gastro-Intestinal and Urinary Tract.

**Conveniently taken in Tablets, which readily dissolve.**

Supplied in 5 gr. tablets, bottles of 25 and 100, and in powder in ounces.

Samples and Literature supplied by

THE BAYER COMPANY, Inc.  
117 Hudson St., New York, N. Y.



# Chicago Pasteur Institute

26th YEAR

812 NORTH DEARBORN STREET

CHICAGO

FOR THE PREVENTIVE TREATMENT OF HYDROPHOBIA

ANTONIO LAGORIO, M.D. LL.D., Medical Director

G. B. BRUNO, M.D., Associate Director

FRANK A. LAGORIO, M.D., Associate Director

**Announcement**—When patients are unable to come to Institute, we can furnish physicians our course of Pasteur treatment by mail, in the State of Illinois. Telephone Superior 973.

*N. B.—We have no branches and the use of our name is unauthorized.*

UNIFORMITY • QUALITY • EFFICIENCY

# Tongaline

MELLIER

ANTI-RHEUMATIC  
ANTI-NEURALGIC

Tongaline Liquid • • • Tongaline Tablets  
Tongaline and Lithia Tablets • Tongaline and Quinine Tablets  
Ponca Compound Tablets, Uterine Tonic Alternative  
Samples on Application MELLIER DRUG COMPANY St. Louis

## DON'T USE TYPHOID VACCINE ALONE

## USE TYPHOID-PARATYPHOID VACCINE

For all immunizations, as it protects against both infections and costs no more than the typhoid vaccine alone.

### LIST No. 42

One Complete Immunization	\$0.50
One 6 Mil (cc.) Bulk Package	1.00
One 20 Mil (cc.) Bulk Package	3.00
One Hospital Package (12 immunizations)	3.50

## SWAN-MYERS COMPANY

Pharmaceutical and Biological Laboratories

INDIANAPOLIS

INDIANA, U. S. A.

GOVERNMENT LICENSE No. 58



## "An Ounce of Prevention Is Worth a Pound of Cure"

**Immunize your patients** against Influenza and "Colds" NOW.  
**Do not wait** until respiratory affections are prevalent.

**Influenza Serobacterin Mixed Mulford** will give immunity from "Colds" and Influenza to a large percentage of patients infected by the organisms used in preparing the Serobacterin.



Supplied in packages contain-  
ing four aseptic glass syringes as  
follows:

	Syr. A	Syr. B	Syr. C	Syr. D
B. influenzae . . . . .	125	250	500	1000 mil.
Staphylococcus albus . . . . .	125	250	500	1000 r. il.
Staphylococcus aureus . . . . .	125	250	500	1000 mil.
Streptococcus . . . . .	125	250	500	1000 mil.
Pneumococcus . . . . .	125	250	500	1000 mil.
M. catarrhalis (group) . . . . .	125	250	500	1000 mil.

## Mulford Typho-Serobacterin

**For Immunization and Treatment of Typhoid Fever**

The value of immunizing against typhoid fever is established. The results secured by the Armies and Navies of all Nations now at war absolutely prove its efficiency. Supplied in packages of three aseptic glass syringes, graduated as follows:

	1st Dose	2nd Dose	3rd Dose
Bacillus typhosus . . . . .	1200	2000	2000 million
B. paratyphosus "A" . . . . .	500	1000	1000 million
B. paratyphosus "B" . . . . .	500	1000	1000 million

Also supplied in 4-syringe therapeutic package and 5 c.c.

**Typho-Serobacterin Mixed** is coming into general favor for immunization as well as treatment. It affords immunity against the typhoid and the paratyphoid "A" and "B" bacilli present in about 10% of typhoid cases.

Literature describing method of treatment and dosage, together with special educational bulletins for distribution to your patients, sent on request.

## H. K. MULFORD CO., Philadelphia, U. S. A.

Manufacturing and Biological Chemists

29445



# Doctors!

If you see the "adv."  
in the Journal the  
advertiser is reliable.

Buy from our  
Advertisers

and make your Jour-  
nal the best paying  
as well as the best  
reading Journal.

## The STORM Binder and Abdominal Supporter

PATENTED



SACRO-ILIAC BELT

No Whalebones. No Rubber Elastic.  
Washable as Underwear

High and Low Operations, Hernia,  
Relaxed Sacro-iliac Articulations,  
Floating Kidney, Obesity, Preg-  
nancy, Ptosis, Pertussis, etc.

Send for illustrated folder and Testimonials of Physicians.  
Mail Orders filled within Twenty-four Hours.

KATHERINE L. STORM, M. D.  
1541 Diamond St., PHILADELPHIA, PA.

## 50% Better Prevention Defense Indemnity

1. All claims or suits for alleged civil malpractice, error or mis- take, for which our contract holder,
2. Or his estate is sued, whether the act or omission was his own
3. Or that of any other person (not necessarily an assistant or agent),
4. All such claims arising in suits involving the collection of pro- fessional fees,
5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
6. Defense through the court of last resort and until all legal remedies are exhausted.
7. Without limit as to amount ex- pended.
8. You have a voice in the selec- tion of local counsel.
9. If we lose, we pay to amount specified, in ad- dition to the unlimited defense.
10. The only contract containing all the above features and which is protection per se.

A Sample Upon Request

The  
MEDICAL PROTECTIVE COMPANY  
of Ft. Wayne, Indiana.

Professional  
Protection, Exclusively

**A  
NEW  
BOOK**



**SEND  
FOR  
IT**

**GRADWOHL  
BIOLOGICAL LABORATORIES**

928 North Grand Avenue  
ST. LOUIS, MO.

R. B. H. GRADWOHL, M. D., Director

**A** LIMITED number of copies of "**Chemico-Biological Diagnostics**" will be distributed to interested members of the profession upon request. (Coupon attached).

This book gives up to the minute facts about modern diagnosis, the scope of laboratory consultations, and the interpretations of Micro-Chemical findings.

On every Wassermann specimen we do the **Hecht-Gradwohl Test**; (no additional charge).

**New Blood Chemical Tests** which have proven so valuable in nephritis, diabetes mellitus, gout and rheumatism.

**PASTEUR TREATMENT BY MAIL**

Course of eighteen treatments by special delivery mail daily.

*Write for literature on any phase of our work  
Slides, Containers, Fee Lists, etc., sent free*

**GRADWOHL BIOLOGICAL LABORATORIES**

928 N. Grand Ave., St. Louis, Mo.

Please send me your booklet "**Chemico-Biological Diagnostics**"

Name.....

City.....

State.....

**Send Your Specimens for Diagnosis**

**TO THE**

**Columbus Medical Laboratory**

ESTABLISHED 1893

**31 N. State Street - - Chicago, Illinois**

**WASSERMANN** and other serum tests.

**AUTOGENOUS VACCINES** prepared.

**TISSUE** from surgical cases for diagnosis.

Urine, Sputum and Blood tests.

Post Mortem and Medico Legal Advice.

Water, Food and Drug Analyses.

**Dr. Adolph Gerhrmann, Pres.**

**Central 2740**

**Nights, Oakland 6938**



## LISTERINE

A trustworthy, unirritating solution composed of volatile and non-volatile antiseptics; extensively and satisfactorily employed in dilution up to 25% as a wet dressing for surgical and accidental wounds.

## LISTERINE

Suitably diluted, applied by injection, douche or spray, often serves a useful purpose in catarrhs and conditions involving hyper-secretion from mucous surfaces. It is an efficient deodorizer.

## LISTERINE

On account of its boric and benzoic acid constituents, forms a suitable lotion in dermatitis following vaccination. In various cutaneous disorders, its use allays excessive itching or irritation, and promotes cleanliness while exercising its antiseptic effect.

Descriptive literature on request

# Lambert Pharmacal Company

Twenty-first and Locust Streets

St. Louis, Mo., U. S. A.

## RADIUM FOR RENT

BY

### THE PHYSICIANS' RADIUM ASSOCIATION of CHICAGO

(Incorporated under the laws of Illinois: "Not for profit")

Any case, in which radium therapy is indicated, is provided for in our large assortment of radium applicators. Loaned on application from any responsible physician, case having first been passed on by us after receipt of adequate information. Certain cases may be sent to our office for treatment. Moderate rental fees charged. For further particulars address

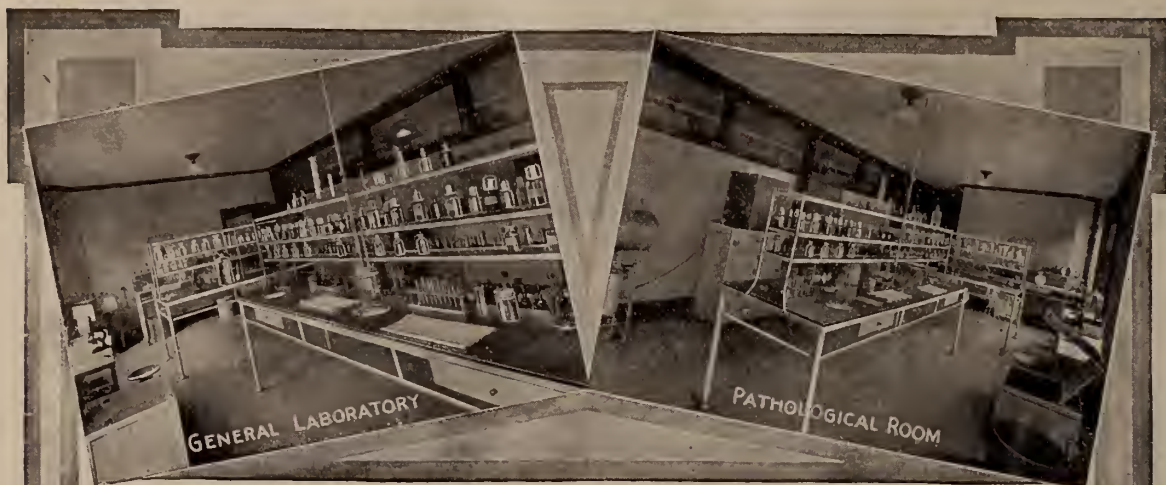
#### THE PHYSICIANS' RADIUM ASSOCIATION

1104 Tower Bldg., 6 N. Michigan Ave.,

Telephones: Randolph 6897-6898

CHICAGO

Board of Directors: WILLIAM L. BAUM, M.D.; THOMAS J. WATKINS, M.D.; FREDERICK MENGE, M.D.; WALTER S. BARNES, M.D.; ALBERT WOELFEL, M.D. Managing Director: ALBERT WOELFEL, M.D.



## CHICAGO LABORATORY CLINICAL ANALYTICAL

Marshall Field Annex Bldg.  
25 E Washington St.

CHICAGO

Established 1904

Phone Randolph 3610

**M**ODERN equipment, combined with years of clinical and analytical experience, is at your service. Our reputation and names stand back of our work.

Serological Tests. Pathological Examination of Tissue. Autogenous Vaccines. Complement Fixation Test for Gonorrhea, Sputum, Smears, Pus, etc. Urinalysis, Complete Chemical and Microscopical. All work at moderate prices. Write for our fee table with instructions for sending specimens. Sterile containers and culture media on request. Prompt reports by mail, telephone or telegraph. During the summer season we urge the importance of an analysis of well waters and other sources of supply.

**RALPH W. WEBSTER, M.D., Ph.D.**

*Director of Chemical Department*

**THOMAS L. DAGG, M.D.**

*Director of Pathological Department*

**C. CHURCHILL CROY, M.D.**

*Director of Bacteriological Department*





# HORMOTONE

The Dynamogenic Hormone Tonic for

## Asthenic Conditions

HORMOTONE has been used with success in the treatment of many intractable cases. It is primarily indicated in adrenal insufficiency, but is also useful in functional impotence, sterility due to ovarian insufficiency, amenorrhea, dysmenorrhea and menopausal disorders.

The Fatigue Syndrome Yields to  
Hormotone as to No Other Agent

DOSE: *One or two tablets three times daily before meals.*

In Neurasthenia associated with High Blood Pressure use

**HORMOTONE WITHOUT PITUITARY**

**G. W. CARNRICK CO., 31 Sullivan Street, NEW YORK**



Trade Mark of  
The Society of Chemical  
Industry in Basle,  
Switzerland

## *The premier digitalis*

is the digitalis which gives you  
results when others have failed

## DIGIFOLINE CIBA

will stand this test

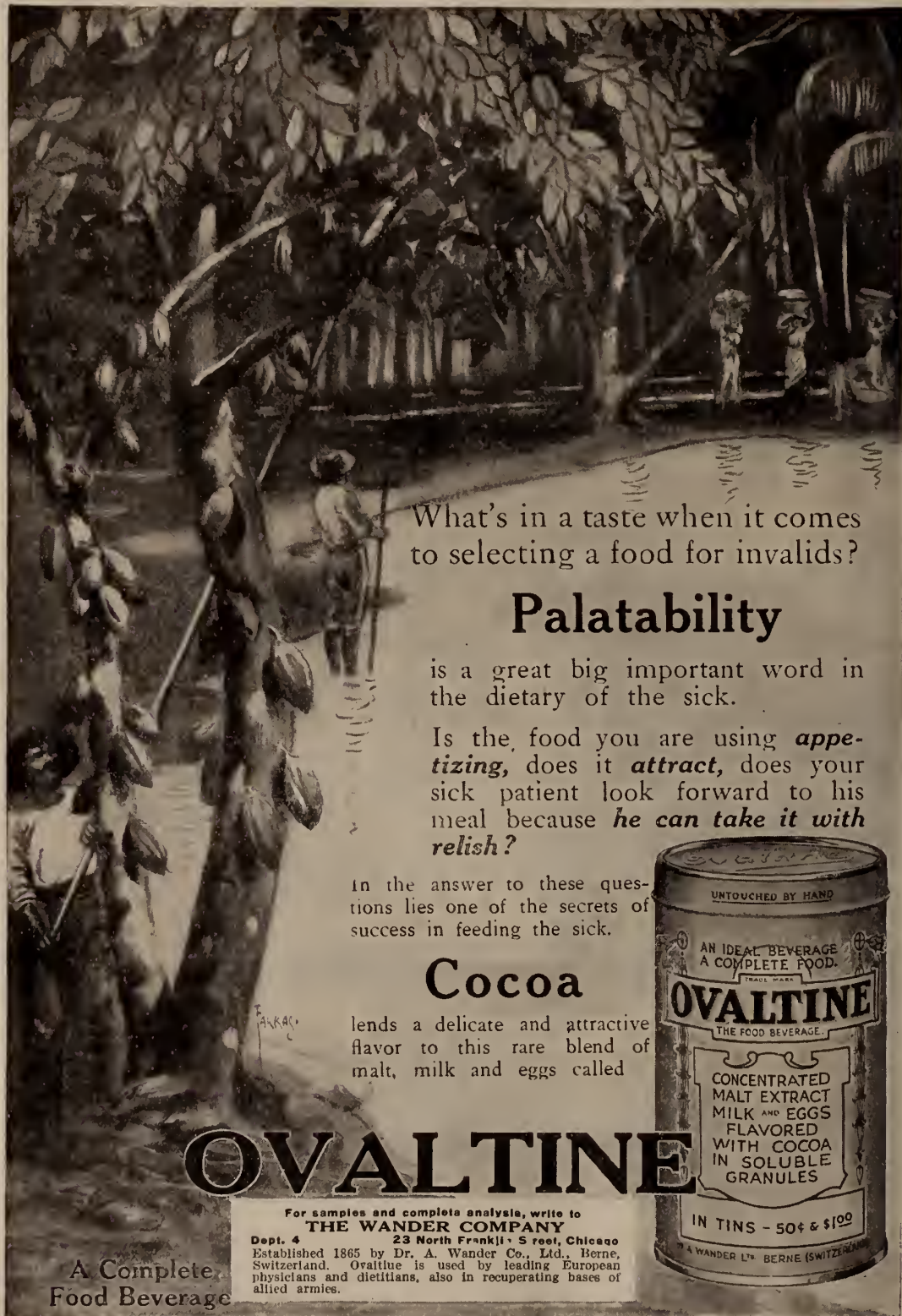
according to the actual experiences  
of physicians

*Tablets and Ampoules*

Send for Literature

**A. KLIPSTEIN & COMPANY**

New York



What's in a taste when it comes to selecting a food for invalids?

## Palatability

is a great big important word in the dietary of the sick.

Is the food you are using *appe-tizing*, does it *attract*, does your sick patient look forward to his meal because *he can take it with relish*?

In the answer to these questions lies one of the secrets of success in feeding the sick.

## Cocoa

lends a delicate and attractive flavor to this rare blend of malt, milk and eggs called

# OVALTINE

**A Complete Food Beverage**

For samples and complete analysis, write to  
**THE WANDER COMPANY**  
 Dept. 4 23 North Franklin Street, Chicago  
 Established 1865 by Dr. A. Wander Co., Ltd., Berne, Switzerland. Ovaltine is used by leading European physicians and dietitians, also in recuperating bases of allied armies.





# Calcreose

The value of creosote has long been recognized by authorities in the treatment of diseases of the throat and lungs and in gastro-intestinal infections.

The use of creosote has been neglected largely because of difficulties of administration.

Calcreose, a chemical combination of creosote and calcium (contains 50% creosote) overcomes many of the objections.

Furthermore the combination (creosote and calcium) is believed to have therapeutic properties not held by either drug alone. Calcium being quite essential in many cases, particularly tuberculosis.

Physicians are urgently requested to investigate the value of Calcreose in the treatment of

## Throat and Lung Diseases

and

### Gastro Intestinal Infections

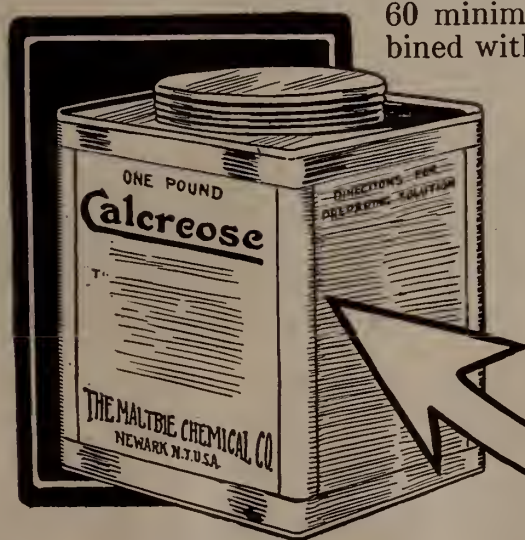
Careful and accurate clinical work demonstrates that as high as 60 minims of creosote, when combined with calcium as in calcreose, may be safely administered daily in a large per cent of cases without digestive disturbance (reports of much higher dosage have been made.)

For complete formulae and literature, address

**The Maltbie Chemical Co.**

NEWARK,

NEW JERSEY



# TYPHOID FEVER

---

PROPHYLAXIS.  
DIAGNOSIS.  
TREATMENT.

## Typhoid Vaccine, Prophylactic.

For protective inoculation against typhoid fever.

The immunizing power of this vaccine is fully established.

Bio. 427—3 bulbs; 3 doses.  
\*Bio. 426—3 syringes; 3 doses.

Bio. 428—1 syringe; 3 doses.  
Bio. 429—Hospital package, 30 doses.

\*Supplied on unspecified orders.

Literature with each package.

## Typhoid Agglutometer.

For diagnosis of typhoid fever.

The Widal Test without the use of either a live culture or a microscope.

Two forms: Typhoid Agglutometer No. 1 and  
Typhoid Agglutometer No. 2.

See our catalogue, page 248.

Directions for use accompany each outfit.

## Typhoid Phylacogen.

For the treatment of typhoid fever.

We have case reports of hundreds of patients treated with this modern therapeutic agent. They afford conclusive proof of the value of this Phylacogen.

Bulbs of 10 mils (Cc.), one in a package.  
Bulbs of 1 mil (Cc.), five in a package.

Literature with each package.

Home Offices and Laboratories,  
Detroit, Michigan.

**Parke, Davis & Co.**

**50 Years of Pharmaceutical Progress**



## FELLOWS' SYRUP

Differs from other preparations of the  
Hypophosphites. Leading Clinicians  
in all parts of the world have recognized  
this important fact. **HAVE YOU?**

**TO INSURE RESULTS,**  
**Prescribe the Genuine**

**R** Syr. Hypophos. Comp. **FELLOWS'**

**REJECT** < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL MANUFACTURING CO. LTD.  
26 CHRISTOPHER ST.  
NEW YORK

## TUBERCULOSIS - ALBUQUERQUE, NEW MEXICO

Climatic Conditions Unsurpassed  
Altitude 5000 feet  
In the LAND OF SUNSHINE

Experienced Medical Supervision  
Trained Nurses in Constant Attendance  
All Approved Therapeutic Measures Employed

**The Murphey Sanatorium**



A High-Class Institution for the Treatment of Tuberculosis.  
Forty Rooms—Ten with private bath—Thirty with bath between each two rooms.  
Every Room has a Private Sleeping Porch.  
Located in the midst of beautiful Mountain Scenery.

**Rates: \$18.50 to**  
**\$25.00 per week**  
**NO EXTRAS**

DESCRIPTIVE BOOKLET AND FULL INFORMATION MAILED ON REQUEST

<b>THE MURPHEY SANATORIUM,</b>		<b>Albuquerque, New Mexico</b>
<b>W. T. MURPHEY, M. D.,</b>	<b>MRS. HATTIE SOWER,</b>	<b>DAVID A. SPEAR, M. D.</b>
MEDICAL DIRECTOR	SUPT.	BACTERIOLOGIST



## THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILL.

is devoid of the "institutional atmosphere."  
It is designed and conducted to meet the  
requirements of patients who demand



### Privacy and Individual Attention

*Special consideration is given  
to Quality of Service*

Rates \$25.00 to \$35.00 per week

H. V. PETTIT, Supt.

OTTAWA

ILLINOIS



## Chicago Fresh Air Hospital

(FOR TUBERCULOSIS)

*At Rogers Park, Chicago, Illinois*

Patients received in *all* stages of Pulmonary Con-  
sumption.

Private Rooms and Board, \$25.00 per week.

Open Porch and two-bed Rooms, with Board, \$15.00.

**Tuberculin Treatment  
Artificial Pneumo-Thorax**

**DR. ETHAN A. GRAY,**

*Medical Superintendent.*

## THE POTTENGER SANATORIUM

MONROVIA, CALIFORNIA

FOR DISEASES OF THE LUNGS AND THROAT



A thoroughly equipped institution for the  
scientific treatment of tuberculosis. High  
class accommodations. Ideal all-year-  
round climate. Surrounded by orange  
groves and beautiful mountain scenery,  
45 minutes from Los Angeles.

F. M. POTTENGER, A.M., M.D. LL.D.,  
Medical Director.

J. E. POTTENGER, A.B., M.D., Assistant  
Medical Director and Chief of Laboratory.

GEORGE H. EVANS, M.D. San Francisco,  
Medical Consultant.

For Particulars, Address THE POTTENGER SANATORIUM, Monrovia, California  
LOS ANGELES OFFICE, 1100-1101 TITLE INSURANCE BUILDING, FIFTH AND SPRING STREETS



# EDWARD SANATORIUM

For the Treatment of Incipient Pulmonary Tuberculosis  
NAPERVILLE, ILLINOIS



Established 1907. Attractive surroundings. Large grounds. Open-air sleeping cottages and Infirmary with all appointments necessary for the comfort of the patients.

Modern hygienic-dietetic methods of treatment. Medical and laboratory facilities. Resident physicians and trained nurses.

Tuberculin Treatment and Artificial Pneumothorax in suitable cases

For detailed information, rates and rules of admission, apply to

CHICAGO TUBERCULOSIS INSTITUTE, 8 South Dearborn Street, Room 1212, CHICAGO, ILL.



On Main Line Chicago, Milwaukee & St. Paul Railway  
30 Miles West of Milwaukee

# Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

For Nervous and Mild Mental Diseases

Building New, Most Approved Fireproof Construction

ARTHUR W. ROGERS, M.D., Resident Physician in Charge

LONG DISTANCE TELEPHONE

Built and equipped to supply the demand of the neurasthenic, borderline and undisturbed mental case for a high class home free from contact with the palpable insane, and devoid of the institutional atmosphere. Forty-one acres of natural park in the heart of the famous Wisconsin Lake Resort Region. Rural environment, yet readily accessible. The new building has been designed to encompass every requirement of modern sanitarium construction, the comfort and welfare of the patient having been provided for in every respect. The bath department is unusually complete and up-to-date. Number of patients limited, assuring the personal attention of the resident physician in charge.

Trains met at Oconomowoc on request.

# The Norbury Sanatorium

JACKSONVILLE

--

ILLINOIS

Established by Dr. Frank P. Norbury, 1901

Incorporated and Licensed

"Maplewood" — "Maplecrest"

Capacity Forty Beds

PRIVATE RESIDENTIAL HOMES for the treatment of Nervous and Mental Disorders. Especial attention given to the treatment, by approved modern methods, of the Psycho-neuroses, Exhaustion states and selected Psychoses and addiction cases.

Dr. FRANK P. NORBURY,  
Medical Director. (Late  
Allentown State Board of Ad-  
ministration. Formerly  
Supt. Kankakee State Hos-  
pital.)

Dr. ALBERT H. DOLLEAR  
Superintendent (Late  
Clinical Asst. State Psycho-  
pathic Institute, Kankakee,  
Formerly Asst. Supt. Water-  
town State Hospital.)

Address all communications, THE NORBURY SANATORIUM, 806 South Daimond Street, JACKSONVILLE, ILLINOIS  
Springfield Office, DR. FRANK P. NORBURY, 407 South Seventh Street, by appointment

# Kenilworth Sanitarium

(Established 1905)

## KENILWORTH, ILLINOIS

(C. & N.-W. Railway. Six miles north of Chicago)



All correspondence should be addressed to Kenilworth Sanitarium, Kenilworth, Illinois

Built and equipped for the treatment of nervous and mental diseases. Approved diagnostic and therapeutic methods. An adequate night nursing service maintained. Sound proof rooms with forced ventilation. Elegant appointments. Bath rooms en suite, steam heating, electric lighting, electric elevator.

### Resident Medical Staff

Ella Blackburn, M. D., Sanger Brown, M. D., Sherman Brown, M. D.  
Chicago Office: 59 East Madison Street  
Telephone: Randolph 5794. Consultation by appointment only



Established 1867

# BELLEVUE SANITARIUM

BATAVIA, ILLINOIS  
near CHICAGO

*For Nervous and Mental Diseases  
of Women Only*

Restful, homelike and accessible. Treatment modern,  
scientific and ethical.

TERMS MODERATE. WRITE FOR BOOKLET

How can you help to make the JOURNAL the best paying as well as the best reading Journal? By buying from our Advertisers. If you saw the "ad" in the JOURNAL, the advertiser is reliable.



BUILDING ABSOLUTELY FIRE-PROOF

# Waukesha Springs Sanitarium

FOR THE CARE AND TREATMENT OF  
**NERVOUS DISEASES**

BYRON M. CAPLES, M.D., Superintendent

Waukesha

::

Wisconsin



# NEURONHURST

Dr. W. B. Fletcher's Sanatorium



**For Treatment of Mental and Nervous Diseases, Including Legally Committed and Voluntary Cases**  
Well equipped with all facilities for the care and treatment of all forms of mental and nervous diseases, inebriety, drug addiction and those requiring recuperation and rest. Gynecological department is in charge of skilled women physicians. All approved forms of Hydrotherapy, Balneotherapy, Massage, Swedish Movements, etc. All forms of Electrical Treatments. Phototherapy, High Frequency and X-Ray work. A strictly ethical institution. Correspondence with physicians invited. For particulars and terms, address:  
**DR. MARY A. SPINK, Superintendent.** Long Distance Telephones **1140 E. Market St., INDIANAPOLIS**

## DR. SIDNEY D. WILGUS

Retiring Superintendent of Kankakee State Hospital, also former Superintendent of Elgin State Hospital.

### Begs to Announce

that he has purchased a Sanitarium at Rockford, Ill. (The Ransom)

and is prepared to give personal care and attention to mental and nervous cases and drug addictions. Modern features having been added, the equipment is qualified to give up-to-date treatment. Also tennis, croquet, boating, and other out-door exercises are prescribed. A nine-hole golf course is near by. Correspondence solicited, or, to save time, telephone: Long Distance, Rockford 3767, and reverse the charges. On request patients are met at any train with an automobile.

**Mail address, DR. SIDNEY D. WILGUS, Box 304, Rockford, Ill.**

**Chicago Office, Thursday Mornings until 12 at Suite 1603, 25 E. Washington St.**

**And by appointment**



ENTRANCE

WEST HOUSE

OFFICE AND BATH HOUSE

PSYCHOPATHIC HOSPITAL

GYMNASIUM

Established  
in 1884

## THE MILWAUKEE SANITARIUM

For Mental and Nervous Diseases

Wauwatosa,  
Wis.

Located at Wauwatosa (a suburb of Milwaukee), on C., M. & St. P. Ry., 2 1/2 hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two lines street cars. Complete facilities and equipment as heretofore announced. Psychopathic Hospital. Continuous baths. Fireproof building, separate grounds. 1 West House. Rooms on suite with private baths. 1 Gymnasium and Recreation Building. Physical culture, "Zander" machines, shower baths. 1 Modern Bath House. Hydrotherapy. Electrotherapy. Mechanotherapy. 1 30 acres beautiful all forest and lawn. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

**RICHARD DEWEY, A. M., M. D.**

**EUGENE CHANEY, A. M., M. D.**

**WILLIAM T. KRADWELL, M. D.**

CHICAGO OFFICE: E. Marshall Field Annex, 25 E. Washington Street, Room 823, Wednesdays 1 to 3 P. M., (except in July and August) Tel. Centre 1163  
MILWAUKEE OFFICE: Goldsmith Building, Room 504, Consultation by appointment. Tel. Main 81.  
TELEPHONE SANITARIUM OFFICE: Milwaukee-Wauwatosa 16.



## The Cincinnati Sanitarium For Mental and Nervous Diseases

Incorporated 1873

A strictly modern hospital fully equipped for the scientific treatment of nervous and mental affections. Situation retired and accessible. For details write for descriptive pamphlet.

F. W. Langdon, M.D., Medical Director

B. A. Williams, M. D., Resident Physician

Emerson A. North, M. D., Resident Physician

H. P. COLLINS, Business Manager, Box No. 4, College Hill, Cincinnati, Ohio



ABSOLUTELY FIREPROOF BUILDING

LESS THAN THREE HOURS FROM CHICAGO

## Mud Baths

For the treatment of RHEUMATISM, Nervousness, Kidney, Liver and Skin Diseases, and all ailments requiring elimination and relaxation. Location beautiful; climate healthful; 80 acres of private grounds.

DR. AUGUSTUS S. GILLES, Medical Director

*Correspondence with physicians solicited*

For rates, literature and reservations, address

**Waukesha Moor (Mud) Bath Co.**

WAUKESHA, WISCONSIN

## "BEVERLY FARM"

Home and School for Nervous and Backward Children

5 buildings, schools and gymnasium, 176 acres of land, 40 acres of timber, containing beautiful Camp Belle log cabin for recreation; separate buildings for boys and also children under 10 years of age. Thirty-six years experience. Consultations at home if desired. Publicity avoided. Address all communications to

**W. H. C. SMITH, M. D., Superintendent**

GODFREY, MADISON CO., ILLINOIS

"Beverly Farm" was awarded Grand Prize by Committee of Awards of the Louisiana Purchase Exposition

## The Peoria Mud Baths

We insist that your patients can eliminate as freely and as effectually in Illinois as in any other State in the Union.

Strict ethical relations. Thoroughly equipped. Have had thousands of patients.

DR. T. W. GILLESPIE, Medical Supt.

**SULPHUR SPRINGS SANITARIUM**  
215-217 N. Adams St. Peoria, Illinois





# DR. WEIRICK'S SANITARIUM

FORMERLY DR. BROUGHTON'S SANITARIUM  
ESTABLISHED IN 1901

**For Opium, Morphine  
Cocaine and Other Drug  
Addictions, Including  
Alcohol and Special  
Nervous Cases**

Methods easy, regular, humane.  
Good heat, light, water, help, board,  
etc. Number limited to 44. A well  
kept home. Nervous-Mental De-  
partment in charge of Dr. W. L.  
Ransom. Address

**DR. G. A. WEIRICK**  
SUPERINTENDENT

**2007 South Main Street**

Phone 538  
**Rockford - - - Illinois**

**PETTEY & WALLACE**  
958 S. Fifth Street  
MEMPHIS, TENN.  
**SANITARIUM**



FOR THE TREATMENT  
OF

**Drug Addiction, Alcoholism,  
Mental and Nervous Diseases**

A quiet, home-like, private, high-  
class institution. Licensed. Strictly  
ethical. Complete equipment. Best  
accommodations.

Resident physician and trained  
nurses.

Drug patients treated by Dr.  
Petty's original method.

Detached building for mental  
patients.

# The Peoria Sanatorium

A private Sanatorium for the treatment of Nervous and Mental Diseases,  
by modern methods. Flowing Sulphur Spring. Licensed by the State.

**DRUG AND LIQUOR HABITS TREATED**  
WRITE FOR BOOKLET

**Director, DR. GEO. W. MICHELL**

**PHONE MAIN 225.**

**Address, 106 N. Glen Oak, PEORIA, ILL.**

# LEUZARDER'S

## One Book System of Practical Book-keeping

A perfect system of Book-keeping, with **Cash Journal, Ledger, Etc., all in one Book.**

The most compact, simple, convenient and practical method of handling accounts which has ever been presented.

**Each book is complete in itself and carries a full set of instructions and examples.**

Especially arranged for the use of Dentists, Doctors, Surgeons, Lawyers, and others whose income is derived from personal service.

**PRICE SIX DOLLARS**

## B. T. LEUZARDER & CO.

New York Life Building,

Chicago, Ill.

**Preparedness is the Slogan of the Day. We are Prepared** to furnish promptly to the specialist in every branch of surgery the correct instrument and apparatus which are of such great assistance in the performance of the Surgeon's work



**V. MUELLER & CO.,** Makers of Surgeons' Instruments, Hospital and Office Equipment, 1771-1781 Ogden Ave., CHICAGO



## (a) QUALITY—(z) QUALITY

THAT'S a bird's-eye-view of our laboratory methods.

*We start with first quality drugs and chemicals.* Every step of every process is critically watched by an expert; and every stage of every process is carefully counter-checked by two experts. From (a) to (z) there is a constant, critical, conscientious censorship of every little detail. And the logical end—result?—QUALITY PRODUCTS! They surely will merit your confidence and justify your specification of "S & D."

### SHARP & DOHME

SINCE 1860

*Purveyors to Particular Prescribers*

## The Standard Laboratories

### MANUFACTURING PHARMACISTS

QUALITY, SERVICE and PRICE of drugs are necessary to success in the practice of medicine. Our products are manufactured from the purest drugs and chemicals obtainable, under the most skillful supervision, and the service is prompt. Our prices are the lowest consistent with quality.

**YOUR ORDERS SOLICITED**

**2626-2628 Shields Avenue - CHICAGO, ILL.**

Phone Calumet 6090

C. W. Hanford, M. D.

Practice limited to

# RADIUM THERAPY

## UTERINE HEMORRHAGES

Malignant and Benign Growths  
TREATED WITH RADIUM

*Perfected Mechanical Devices for the Scientific Application to Bladder,  
Rectum, Oesophagus, Throat and Post-nasal Space.*

**REFERRED CASES WILL REMAIN UNDER THE GENERAL SUPERVISION OF  
THE ATTENDING PHYSICIAN**

Suite 1010  
Columbus Memorial Building  
31 NO. STATE STREET

CHICAGO

Phone MAJESTIC 7330  
HOURS: 9 A. M. to 12 M.  
Afternoons by Appointment

## PRESCRIPTION SERVICE THAT SATISFIES

The service that firmly holds customers and constantly attracts new ones,  
is SERVICE that SATISFIES.

The facilities of

### THE WHITE-HAINES OPTICAL CO.

are equal to the severest test.

ACCURACY is our first consideration.

Prompt Deliveries consistent with accuracy is our second consideration.

Our ability to handle a large volume of work promptly is worthy of your consideration.

We are Headquarters for Punktals, Kryptoks, Ultex one-piece, Naktic and Korectal (Trade Mark Reg.) lenses.

*Try our "SERVICE THAT SATISFIES"*

## THE WHITE-HAINES OPTICAL CO.

COLUMBUS, O. INDIANAPOLIS, IND. SPRINGFIELD, ILL.



# Chicago College of Medicine and Surgery

**MEDICAL  
DEPARTMENT OF  
VALPARAISO  
UNIVERSITY**



**Main College Building and Willard Hospital**

**702-706  
SO. LINCOLN ST.  
CHICAGO, ILL.**

This College has an enrollment of 500 students. The Laboratory and Hospital facilities are abundant. The Faculty consists of men who have distinguished themselves as medical educators. The College is not burdened with debts and is therefore able to expend all of its income upon the courses of instruction. The Calendar year is divided into three semesters of four months each. The Fall semester begins on the last Tuesday in September. The Winter semester begins on the first Monday in February. The Summer semester begins on the first Monday in May.

*For catalogue or further information address*

**J. NEWTON ROE, Secretary**

**706 S. Lincoln St., Chicago, Ill.**

## Chicago Eye, Ear, Nose and Throat College

**A Post-Graduate School for Prac-  
titioners of Medicine**

**235 W. Washington Street  
Chicago, Ill.**

**Catalogue on Application**

## Chicago Maternity Hospital and Training School for Nurses

**ACCOMMODATES 25 PATIENTS  
RATES: \$10.00 to \$25.00 PER WEEK**

Well infants cared for in nursery for \$5.00 per week.  
Training School for Obstetrical and Infants' nurses.

Address

**EFFA V. DAVIS, M.D., 2314 N. Clark St., Chicago**

## Home Training In Nursing



We offer a thorough extension course to beginners and also to practical nurses wishing to perfect themselves in the theory and science of nursing.

There is in every community a demand for competent nurses — women physically qualified and possessing natural ability, who for various reasons cannot leave home to get their training. Through the aid of the very thorough system of instruction used by this school for a period of sixteen years, we have trained hundreds of women who have "made good" as practical nurses. In fact our graduates adapt themselves to the inconveniences of private nursing more readily than the hospital-trained nurse. They are loyal to the home doctor, whose co-operation has made their success possible.

Reputable physicians are invited to investigate our methods and co-operate with us by sending the names of earnest women who in their estimation would make desirable applicants. Tuition fees very reasonable—small payment plan. Write for the Sixteenth Annual Announcement. Address

**Karen Esmann, Registrar  
CHICAGO SCHOOL OF NURSING  
116 S. Michigan Blvd., Chicago, Ill.**

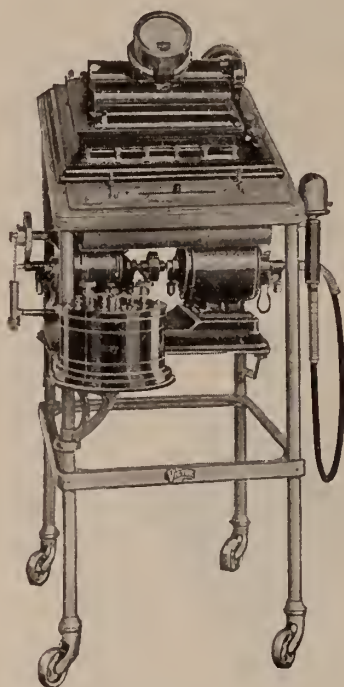


## Electro-Medical and Physical Therapeutics Are Helping to Remove the Scourge of the Great War.

*Here is part of the evidence:*

"Fifty per cent of the disabled men treated by hydro- and electric-therapeutics in the hospitals of France and England are completely restored to physical efficiency."

—abstracted from the report of an official of the R. A. M. C.



If these electrical and physical modalities are so highly efficient in military medicine and surgery, it is logical to presume that these same agents will accomplish results in a broader field in private practice.

The Victor Combistat is one of many suggestions for this work. It is almost universal in its application. The list below gives a good idea of its range of service:

Sinusoidal Current	Vibratory Massage
Galvanic Current	Pneumatic Massage
Cautery Current	Suction
Diagnostic Lamp Current	Compressed Air

All of the above agents are available by means of a single connection to the nearest electric light socket.

Complete information and literature pertaining to the combistat or any other part of the large line of Victor electro-medical and X-Ray apparatus will be cheerfully furnished on request—and without obligation.

### VICTOR ELECTRIC CORPORATION

*Manufacturers of Roentgen, Electro-Medical and Physical Therapeutic Apparatus*

CHICAGO

236 S. Robey St.

CAMBRIDGE, MASS.

66 Broadway

NEW YORK

131 E. 23rd St.

*Sales offices and service stations in all important cities*



# INDEX TO ADVERTISERS

Abbott Laboratories.....	7
Bayer Company.....	8
Bellevue Sanitarium.....	22
Beverly Farm School.....	24
Carrick, G. W., Co.....	15
Chicago College of Medicine and Surgery.....	29
Chicago Eye, Nose & Throat College.....	29
Chicago Fresh Air Hospital.....	20
Chicago Laboratory.....	14
Chicago Maternity Hospital.....	29
Chicago Pasteur Institute.....	9
Chicago School of Nursing.....	29
Cincinnati Sanitarium.....	24
College of Medicine, Univ. of Ill.....	29
Columbus Medical Laboratory.....	12
Crittenton, Chas. N., Co.....	2
Edward Sanatorium.....	21
Fellows Medical Mfg. Co.....	19
Fletcher's Sanatorium.....	23
Gradwohl Biological Laboratories.....	12
Hanford, Dr. C. W.....	28
Horlick's Malted Milk Co.....	2
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Laboratory of Pathology and Bacteriology.....	2
Lambert Pharmaceutical Company.....	13
Lederle Antitoxin Laboratory.....	35
Leuzarder & Co.....	26
Malthie Chemical Co.....	17
Medical Protective Co.....	11
Mead, Johnson & Co.....	4
Mellin's Food Co.....	6
Mellin's Food Co.....	6

Milwaukee Sanitarium.....	23
Mosby Co., C. V.....	36
Mueller & Co., V.....	23
Mulford, H. K., Co.....	10
Murphy Sanatorium.....	19
Norbury Sanitarium.....	21
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Parke, Davis & Co.....	18
Penneyer Sanitarium.....	6
Peoria Mud Baths.....	24
Peoria Sanatorium.....	25
Petty & Wallace's Sanitarium.....	25
Phillips Co., Chas. H.....	32
Physicians' Radium Association.....	13
Pine Sanatorium.....	34
Pitman-Moore Co.....	4
Pottenger Sanatorium.....	20
Purdue, Frederick, Co.....	8
Pure Gluten Food Co.....	5
Quaker Oats Co.....	5, 33
Radium Institute.....	36
Ransom Sanitarium.....	23
Saunders Co., W. B.....	front cover
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Sherman, G. H., M. D.....	5
Standard Laboratories.....	27
Standard Oil Co.....	3
Storm, Katherine L., M. D.....	11
Swan-Myers Co.....	9
Tilden Co., The.....	6
Victor Electric Co.....	30
Wander, Dr. A.....	16
Waukesha Moor (Mud) Bath Co.....	24
Waukesha Springs Sanitarium.....	22
Waukesha Pure Food Co.....	30
Weirick's Sanitarium.....	25
White-Haines Optical Co.....	28

## BUYER'S INDEX

### ABDOMINAL SUPPORTERS

Storm, Katherine L., M. D.....	11
--------------------------------	----

### AUTOMOBILES, ETC.

Standard Oil Co.....	3
----------------------	---

### FOOD

Horlick's Malted Milk Co.....	2
Mead, Johnson & Co.....	6
Mellin's Food Co.....	6
Pure Gluten Food Co.....	5
Quaker Oats.....	5, 33
Wander's Ovaltine.....	16
Waukesha Pure Food Co.....	30

### HOSPITAL

Chicago Fresh Air Hospital.....	20
Chicago Maternity Hospital.....	29

### INVESTMENTS AND INSURANCE

Medical Protective Co.....	11
----------------------------	----

### LABORATORY

Abbott Laboratories.....	7
Chicago Laboratory.....	14
Columbus Medical Laboratory.....	12
Gradwohl Biological Laboratories.....	12
Laboratory of Pathology and Bacteriology.....	2
Standard Laboratories.....	27
Swan-Myers Co.....	16

### MEDICAL BOOK PUBLISHERS

Saunders Co., W. B.....	front cover
Mosby Co., C. V.....	36

### MEDICAL SCHOOLS

Chicago College of Medicine and Surgery.....	29
Chicago Eye, Ear, Nose and Throat College.....	29
College of Medicine, Univ. of Ill.....	29

### MUD BATHS

Peoria Mud Baths.....	24
Waukesha Moor (Mud) Bath Co.....	24

### NURSES

Chicago School of Nursing.....	29
--------------------------------	----

### PHARMACEUTICALS

Abbott Laboratories.....	7
Bayer Company.....	8
Carrick, G. W., Co.....	15
Crittenton, Chas. N., Co.....	2
Fellows Medical Mfg. Co.....	19
Hanford, Dr. C. W.....	28
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Lederle Antitoxin Laboratory.....	35
Lambert Pharmaceutical Company.....	13
Malthie Chemical Co.....	17
Mead, Johnson & Co.....	4
Mellin's Food Co.....	6
Mellin's Food Co.....	6
Mulford, H. K., Co.....	10
Parke, Davis & Co.....	18
Phillips Co., Chas. H.....	32
Pitman-Moore Co.....	4
Purdue, Frederick, Co.....	8
Sherman's Bacterins.....	5
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Swan-Myers Co.....	9
Tilden Co., The.....	6

### SANATORIA & SANITARIA

Bellevue Sanitarium.....	22
Cincinnati Sanitarium.....	24
Edward Sanatorium.....	21
Fletcher's Sanatorium.....	23
Kenilworth Sanitarium.....	22
Norbury Sanitarium.....	21
Milwaukee Sanitarium.....	23
Murphy Sanatorium.....	19
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Penneyer Sanitarium.....	6
Peoria Sanitarium.....	25
Petty & Wallace's Sanitarium.....	25
Pine Sanatorium.....	34
Pottenger Sanatorium.....	20
Radium Institute.....	36
Ransom Sanitarium.....	23
Waukesha Springs Sanitarium.....	22
Weirick's Sanitarium.....	25

### SURGICAL INSTRUMENTS

Mueller & Co., V.....	30
Victor Electric Co.....	30

IN PLACE OF OTHER ALKALIES USE

# Phillips' Milk of Magnesia

"THE PERFECT ANTACID"

For Correcting Hyperacid Conditions—Local or Systemic. Vehicle for Salicylates, Iodides, Balsams, Etc.

Of Advantage in Neutralizing the Acid of Cows' Milk for Infant and Invalid feeding.

## Phillips' Phospho-Muriate of Quinine

Compound

NON-ALCOHOLIC TONIC AND RECONSTRUCTIVE

With Marked Beneficial Action Upon the Nervous System. To be relied Upon Where a Deficiency of the Phosphates is Evident.

THE CHAS. H. PHILLIPS CHEMICAL CO.

NEW YORK

LONDON

FOR SALE—At one-half present prices, complete line of surgical instruments, embracing gynecological, urethral, nose and throat and general operating. All up-to-date and in good condition. Also microtome and excellent microscope. Address all inquiries to Mrs. Stephen C. Glidden, 422 N. Vermilion St., Danville, Ill.

### DO YOU KNOW OF ANY CONTESTED

insurance claims? Our bureau renders its clients expert service in securing policyholders and beneficiaries holding health and accident policies satisfactory adjustment of disputed claims. Our work is conducted through the medical profession. Complete details regarding our system sent upon request to Dr. W. E. Magruder, Med. Dir., Nat. Investigation Bureau, 924 Madison Ave., Baltimore, Md. KK

## CONTENTS—Continued

### ORIGINAL ARTICLES

The Organization of Medical Legislative Work in the County Society. F. C. Gale, M. D., Pekin, Ill.....	264
Syphilis Among Admissions to Elgin State Hospital. Egbert W. Fell, M. D., Elgin, Ill.....	267
Studies in Meningitis. Pneumococcus Meningitis. A. Levinson, M. D., Chicago.....	270
Why Do We Have Recurrences After Operations on the Biliary Tract? Daniel N. Eisendrath, M. D., Chicago	272
Postoperative Meningeal Hemorrhage. G. W. Green, M. D., and J. J. Moore, M. D., Chicago.....	278
Blood Pressure Again—A Few Observations. J. Sherlaw, M. D., Chicago.....	281
Urinary Abnormalities Among the Insane. Howard T. Child, M. D., Kankakee, Ill.....	287

### EDITORIALS

Notice—Papers for Program.....	289
Resolution—By the Council—Red Cross.....	289
Resolution—Death of Doctor Arp.....	289
Keep up the Membership.....	290
Slackers.....	290
Liberty Loan.....	290
Appeal by Mr. Hoover.....	291
Reg Your Pardon!.....	291

### CORRESPONDENCE

Dr. Bloodgood: Crippled Soldier.....	291
--------------------------------------	-----

### PUBLIC HEALTH

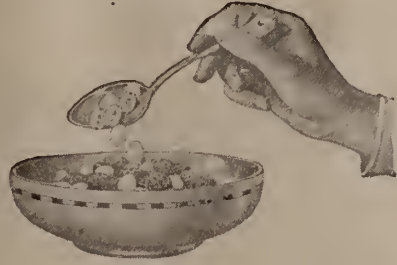
Illinois Makes Rapid Progress.....	292
Venereal Diseases.....	293
Health Officers Assigned.....	293
Springfield Work on Poliomyelitis.....	294

### SOCIETY PROCEEDINGS

Adams County.....	295
Cook County:	
Chicago Ophthalmological Society.....	295
Chicago Laryngological Society.....	295
Iroquois-Ford Counties.....	299
Madison County.....	299
Personals.....	299
News.....	300
Marriages.....	301
Deaths.....	301
Obituary, Doctor Arp.....	302
Book Notices.....	303



Cook County  
 Chas. E. Humiston, Pres.....Chicago  
 J. V. Fowler, Secy.....Chicago  
 Crawford County  
 A. G. Brooks, Pres.....Stoy  
 C. E. Price, Secy.....Robinson  
 DeKaib County  
 Paul E. N. Greeley, Pres.....Waterman  
 J. B. Hagey, Secy.....DeKaib  
 De Witt County  
 J. M. Wilcox, Pres.....Clinton  
 S. L. Thorpe, Secy.-Treas.....Clinton  
 Douglas County  
 Floyd C. Phillips, Pres.....Arthur  
 Walter C. Blaine, Secy.....Tuscola  
 Du Page County  
 (Affiliated with Cook County)  
 Edgar County  
 Wm. A. Buchanan, Pres.....Paris  
 George H. Hunt, Secy.....Paris  
 Edwards County  
 W. E. Buxton, Pres.....West Salem  
 R. L. Moter, Secy.....Aibion  
 Effingham County  
 Frank W. Goodeil, Pres.....Effingham  
 F. Buckmaster, Secy.....Effingham  
 Fayette County  
 L. L. Morey, Pres.....Vandalia  
 Mark Greer, Secy.....Vandalia  
 Franklin County  
 Wm. H. Smith, Pres.....Benton  
 Edgar Austin, Secy.....Benton  
 Fulton County  
 J. C. Simmons, Pres.....Canton  
 Gallatin County  
 J. W. Bowling, Pres.....Shawneetown  
 A. B. Capel, Secy.....Shawneetown  
 Greene County  
 O. L. Edwards, Pres.....Roodhouse  
 L. O. Frech, Secy.-Treas.....White Hall  
 Grundy County  
 Roscoe Whitman, Pres.....Morris  
 F. C. Bowker, Secy.....Morris  
 Hamilton County  
 E. S. Hall, Pres.....McLeansboro  
 P. M. Natton, Secy.....McLeansboro  
 Hancock County  
 Blair Kelley, Pres.....Ferris  
 S. M. Parr, Secy.....Carthage  
 Hardin County  
 W. J. J. Paris, Pres.....Rosiclare  
 F. A. Jones, Secy.....Rosiclare  
 Henderson County  
 W. J. Emerson, Pres.....Carman  
 J. P. Riggs, Secy.....Media  
 Henry County  
 Chas. F. Young, Pres.....Geneseo  
 P. J. McDermott, Secy.....Kewanee  
 Iroquois-Ford District  
 O. O. Hall, Pres.....Milford  
 W. L. Cottingham, Secy.....Paxton  
 Jackson County  
 W. A. Brandon, Pres.....Carbondale  
 H. G. Horstman, Secy.....Murphysboro  
 Jasper County  
 John Hamilton, Pres.....Bogota  
 James P. Prestley, Secy.-Treas.....Newton  
 Jefferson County  
 E. E. Edmondson, Pres.....Mt. Vernon  
 Andy Hall, Secy.....Mt. Vernon  
 Jersey County  
 H. R. Bohannon, Pres.....Jerseyville  
 H. F. Threkeld, Secy.....Jerseyville  
 Jo Daviess County  
 U. S. G. Keller, Pres.....Warren  
 T. J. Stafford, Secy.....Stockton  
 Johnson County  
 C. D. Nobles, Pres.....Buncombe  
 H. W. Walker, Secy.....Grantsburg  
 Kane County  
 A. E. Diller, Pres.....Aurora  
 L. J. Hughes, Secy.-Treas.....Elgin  
 Kankakee County  
 C. W. Geiger, Pres.....Kankakee  
 E. S. Hamilton, Secy.-Treas.....Kankakee  
 Kendall County  
 R. A. Schaefer, Pres.....Plano  
 Robt. McColland, Secy.....Yorkville  
 Knox County  
 A. C. Keener, Pres.....Altoona  
 G. S. Bower, Secy.....Galesburg  
 Lake County  
 John P. O'Neil, Pres.....Highland Park  
 C. S. Ambrose, Secy.-Treas.....Waukegan  
 La Salle County  
 R. C. Fullenweider, Pres.....La Salle  
 E. E. Perisho, Secy.....Streator



## Wheat Steam Exploded

Puffed Wheat is whole wheat, in which each food cell is blasted by steam explosion. In Prof. Anderson's process, over 100 million steam explosions occur in every kernel.

The grains are puffed to bubbles, eight times normal size. They are flaky, thin and crisp.

Thus whole grains are made wholly digestible. All the food granules are broken. Ordinary cooking doesn't break half of them.

By every standard, Puffed Wheat and Puffed Rice are the greatest of whole-grain food. Here every element is made available, and in a food confection.

**The Quaker Oats Company**

Chicago

(1654)

**Puffed  
Wheat**

**Puffed  
Rice**

**and Corn Puffs**

**Each 15c Except in Far West**

## READER!

are you buying your supplies from our advertisers?

Our advertising pages are your property as a member of the Illinois State Medical Society.

Advertisers will pay for space in proportion as you buy from them, and thus make the space valuable to them.

Order now, and write that you saw the "ad" in the JOURNAL.

## WANTED, FOR SALE, AND RENT DEPARTMENT

Advertisements under this heading cost one dollar for four lines or less, and 25 cents for each additional line, each insertion. Payable in advance. Line holds eight ordinary words.

**DRUG AND LIQUOR HABITS CURED.** No suffering or danger. New treatment without delirium. Absolutely satisfactory results. Modern Sanitarium, established eighteen years. Close personal attention. **RALPH SANITARIUM**, 529 Highland Ave., Kansas City, Mo.

**WANTED.**—A first-class masseur wishes position with medical physician, giving such treatment under his direction. Address, Earl C. White, Charles City, Iowa.

## College of Medicine



### University of Illinois

Minimum admission requirements for entrance, fifteen units of work from an accredited High School and in addition two years in a recognized university or college, involving at least one year in college physics, biology, chemistry and six college hours in French or German.

For course of medical study, four years are required. Eligible students will receive the degree of B. S. at the completion of the sophomore year.

A greater measure of patriotic service can be given by physicians than in any other activity. Collegiate year begins October 1st, 1917.

For information concerning course of study, fees, etc., address Secretary.

**College of Medicine of the University of Illinois**  
Box 51 Congress and Honore Streets, Chicago, Illinois



### Resident Physician

**JAMES H. APPLEMAN, M. D.**

Modern institutional treatment administered under home-like conditions. Ethically conducted. Treatment based on latest scientific physical and laboratory findings. A fixed charge based on a complete examination is made to cover entire course of treatment, including examinations, nursing and medical attendance. Privacy assured. Descriptive and illustrated booklet covering both subjects sent free on request.

## The Pine Sanitarium

Established 1900

**1919 Prairie Ave., Chicago, Ill.**

Local and Long Distance Telephone  
Calumet 4543

## Drug and Alcoholic Addictions

**Treated Exclusively**



# Illinois Medical Journal

OFFICE OF PUBLICATION 3338 OGDEN AVENUE, CHICAGO

Vol. XXXII, No. 5

CHICAGO, NOVEMBER, 1917

\$2.00 a Year

## CONTENTS

ORIGINAL ARTICLES		PAGE		PAGE
Individualization in the Treatment of Surgical Inflammations. <i>Edward H. Ochsner, M. D., Chicago</i> .....		305	Nasal Dysmenorrhea and Genital Areas of the Nose. <i>L. Edwin Barnes, M. D., Chicago</i> .....	326
Report of an Interesting Case In its Relation to So-Called Traumatic Hernia. <i>C. R. G. Forrester, M. D., Chicago</i> .....		308	Points and Pointers. <i>G. W. Nesbitt, M. D., Sycamore, Ill.</i> .....	330
Pyelocystitis in Infancy and Childhood. <i>Henry F. Helmholz, M. D., Evanston, Ill.</i> .....		311	A Diagnosis and Treatment of Moral Diseases. <i>E. N. Stenn, M. D., Chicago</i> .....	337
The Importance of Nasal Affections in General Practice. <i>Noah Schoolman, M. D., Chicago</i> .....		314	Psychotherapy in Obstetrics. <i>H. W. Long, M. D., Elmwood, Ill.</i> .....	339
Ileus. <i>Carl Langer, M. D., Chicago</i> .....		317	The Foreigner; a Prey of Medical Quacks. <i>Henry R. Krasnow, M. D., Chicago</i> .....	342
Some Bodily Effects of Depressing Emotions. <i>Meyer Solomon, M. D., Chicago</i> .....		322	Asthma. <i>Richard H. Brown, M. D., Chicago</i> .....	345
			Goiter, the Diagnosis and Treatment. <i>Leigh F. Watson, M. D., Chicago</i> .....	350

(Continued on page 32)

Entered as Second-Class Matter August 28, 1913, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879.

THIRD PRINTING—USED BY U. S. NAVY

## Moorhead's Traumatic Surgery

This work has a wide appeal. It appeals to the surgeon, the practitioner, the mining, railroad, and industrial physician, those having to do with Compensation Law, accident insurance and claims, and legal medicine. But its greatest appeal is to the *general practitioner*—the man in general practice anywhere—because practically the entire work is devoted to those traumatic conditions that form a part of every doctor's daily practice. It takes up such injuries as dislocations, fractures, contusions, various kinds of wounds, felons, infected hangnails, boils, carbuncles hematoma of the scalp from contusions, hemorrhage,—accidents that frequently demand prompt and efficient treatment to save life, to assure restoration of function. Throughout the work two cardinal principles of traumatic surgery are emphasized—*disinfection and conservation*. The latest methods are given. The open-air and sunlight treatment, being used with such success in the great War in Europe, is definitely detailed, not at second hand, but from the personal experience of Dr. Moorhead after many years' use of it. You also get *Dakin's solution* for infected wounds, and a great deal of information valuable to those *preparing for military service*.

By JOHN J. MOORHEAD, M. D., Associate Professor of Surgery, New York Post-Graduate Medical School and Hospital. Octavo of 750 pages, with 520 line-drawings, some in colors.

Cloth, \$6.50 net; Half Morocco, \$8.00 net.

W. B. SAUNDERS COMPANY

Philadelphia and London

This Issue, 6,700 Copies

# Horlick's

## the Original Malted Milk

The *quality* that established "Horlick's," the Original Malted Milk, as a dependable INFANT FOOD over a third of a century ago is *maintained today*, so that it is used extensively by the profession who desire a well balanced food, complete in itself.

Besides being one of the most satisfactory infant-foods, "Horlick's" is of particular advantage as a supplementary nutrient for increasing the flow of milk of the nursing mother, and in assisting the convalescent to make a progressive gain in strength.



**Horlick's Malted Milk Co., Racine, Wis.**

## Clinical Laboratory Analyses

The kind of clinical laboratory work that commands respect

Wassermann and other complement fixation tests - - - - \$5.00

Our technician is a pupil of Wassermann.

Lange Colloidal Gold test of Spinal fluid - - - - - \$5.00

Our technician is a pupil of Lange.

Autogenous Vaccines. In single vials or ampules - - - - - \$5.00

Our technician trained under Michaelis of Berlin and Sir Almroth Wright of London

Tissue Diagnoses. Frozen section, paraffin or celloidin - - - \$5.00

Diagnosis by Dr. Maximilian Herzog

Know the Reputations and Training of Your Laboratory Technicians.

Accurate Analyses of All Secretions, Excretions and Body Fluids.

Mailing Containers on request.

## Laboratory of Pathology and Bacteriology

Dr. Meyer D. Moledetzky, Director

Eleventh (11th) Floor, Suite 1130 Marshall Field Annex Building  
25 East Washington Street

Phones Randolph 6552, 6553



**Stanolind**  
Trade Mark Reg. U. S. Pat. Off.  
**Liquid Paraffin**  
(Medium Heavy)  
Tasteless—Odorless—Colorless

# Before Operation

Stanolind Liquid Paraffin is an ideal laxative for surgical practice.

When used in the proper dose, it thoroughly empties the alimentary canal, without producing irritation or other undesirable effects.

It is particularly valuable in intestinal surgery, because it leaves the stomach and bowels in a quiet state, and because its use is not followed by an increased tendency to constipation.

After an abdominal operation, one or two ounces of Stanolind Liquid Paraffin may be given through a tube while the patient is still under the anaesthetic, or as an emulsion, an hour or two later.

Stanolind Liquid Paraffin is essentially *bland* in its action, causing a minimum amount of irritation while in stomach or intestine. It may also in most cases be gradually reduced without apparently affecting the frequency of the evacuations.

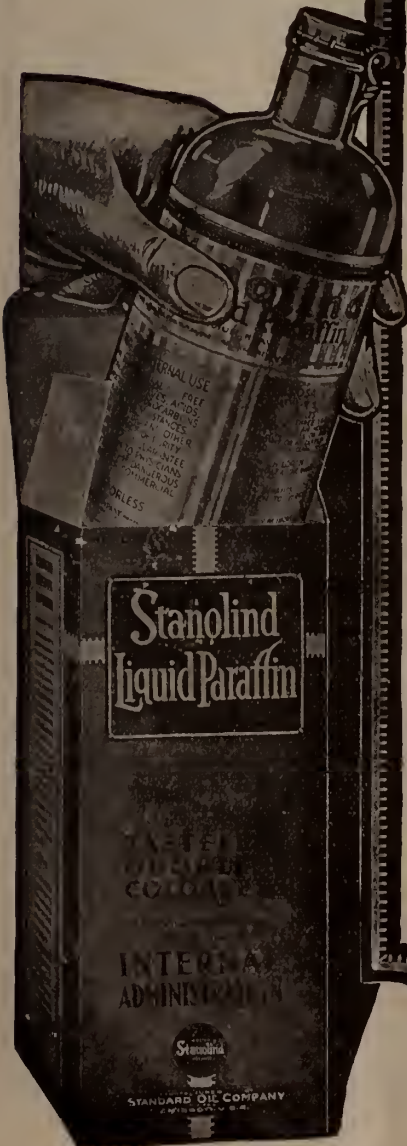
A trial quantity with informative booklet will be sent on request.

**Standard Oil Company**

(Indiana)

72 W. Adams St.  
Chicago, U. S. A.

74



## *An Efficient Sugar for Infant Feeding*

means maximum tolerance, assimilability, and gain in weight with minimum digestive disturbances and diarrhoea for the infant. This is why nearly every pediatricist prescribes

# MEAD'S DEXTRI-MALTOSE

(MALT SUGAR)

**in feeding formulae for infants' diet**

Let us send you samples and literature fully describing the simplicity of using Mead's Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

**MEAD JOHNSON & CO., EVANSVILLE, IND.**



In the present uncertain state of the drug market, with the demand for many items far exceeding the supply, the market is being flooded with crude drugs and chemicals of inferior quality, many of which are being offered at very low prices.

For the protection of American Physicians, crudes and chemicals entering into the manufacture of P-M Co. pharmaceuticals are secured from reliable sources *only* and are subjected to the closest scrutiny by our chemists. Constant analyses and assays protect you, Doctor, against untrustworthy ingredients when you use the pharmaceuticals of



**PITMAN-MOORE COMPANY**  
Pharmaceutical and Biological Chemists  
Indianapolis



# HOYT'S GLUTEN FLOUR

makes *genuine gluten* bread, biscuits, etc., for the *diabetic* and all who require a high protein and minimum starch diet.

Send for name of nearest agent and description of the complete line of our Gluten Products.

**THE PURE GLUTEN FOOD CO.**  
90 West Broadway NEW YORK CITY

# Hay Fever

Successfully Treated with  
**BACTERIAL VACCINES**

Pollen irritation and breathing of the hot dust laden atmosphere favor the development of pyogenic bacteria in the respiratory tract which then becomes a primary factor of the disease.

Experience shows that the immunizing influence of an appropriate bacterin will either cure the disease or so modify it that it causes but little distress. Use Sherman's No. 40.

Write for Literature.

MANUFACTURER  
OF  
BACTERIAL VACCINES  
**G. H. SHERMAN, M.D.**  
Detroit, Mich.  
U.S.A.



# Our Doctor Friends

## Suggested this Bran Food

They found clear bran too uninviting. People would rarely continue.

They regard ground bran as inefficient. They wanted bran flakes.

So we took a famous wheat dainty—Pettijohn's—and made a bran food of it. Now these flavory flakes hide 25 per cent unground bran.

When we announced it, thousands of physicians wrote us for samples of it. And now people are serving about a million dishes weekly, largely by doctors' advice.

We believe that Pettijohn's Flakes and Pettijohn's Flour will solve the bran-food problem to your satisfaction.

# Pettijohn's

*Rolled Wheat with Bran Flakes*

Soft, flavory wheat rolled into luscious flakes, hiding 25 per cent of unground bran. A famous breakfast dainty.

Pettijohn's Flour is 75 per cent fine patent flour mixed with 25 per cent tender bran flakes. To be used like Graham flour in any recipe; but better, because the bran is unground.

**The Quaker Oats Company**

Chicago

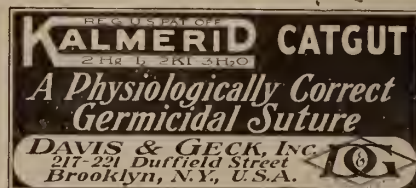
(1755)

# FIRWEIN—Expectorant—Sedative—Antispasmodic

The Better Prescription in the Different Forms of Bronchial Inflammations.

*Free Samples to the Profession*

New Lebanon, N.Y. THE TILDEN COMPANY Manufacturing Pharmacists and Chemists since 1848 St. Louis, Mo.



**DOCTOR:** It is our purpose to give to you on your orders, the best pharmaceuticals that the highest grade of crude drugs, pure chemicals and skilled workmanship, under experienced supervision, can produce.

When our man calls upon you, give him a few moments of your time. He will tell you more about what we are trying to do.

G. D. SEARLE & CO. *Mfrs. of* Fine Pharmaceuticals and Hypodermic Tablets  
215-217-219 W. Ohio St. CHICAGO Telephone North 1704

## INFANT FEEDING

In extreme emaciation, which is a characteristic symptom of conditions commonly known as

### Malnutrition-Marasmus-Atrophy

it is difficult to give fat in sufficient amounts to satisfy the nutritive needs; therefore, it is necessary to meet this emergency by substituting some other energy-giving food element. Carbohydrates in the form of maltose and dextrins in the proportion that is found in

### MELLEN'S FOOD

are especially adapted to the requirements, for such carbohydrates are readily assimilated and at once furnish heat and energy so greatly needed by these poorly nourished infants.

The method of preparing the diet and suggestions for meeting individual conditions sent to physicians upon request.

MELLIN'S FOOD COMPANY,

BOSTON, MASS.



COUGHS, COLDS AND CROUP YIELD TO

# Calcidin

## Be Prepared for Winter Emergencies

Calcidin (Abbott) is an ideal emergency remedy which seldom fails to give results in the treatment of Coughs, Colds, Croup, Influenza, Grip, Bronchitis, Rhinitis and Laryngitis.

Calcidin is the one remedy which stands preeminent as a reliable and effective agent for the quick relief of all catarrhal conditions of the respiratory tract. Calcidin (Abbott) contains a larger amount of available iodine than other similar preparations.

It is used successfully by thousands of doctors. You can get equally good results. Order a plentiful supply now and see that your druggist is stocked.

1-3-grain tablets .....	100, \$0.29; 500, \$0.78; 1000, \$1.35
1-grain tablets .....	100, .40; 500, 1.33; 1000, 2.45
2 1-2-grain tablets .....	100, .59; 500, 2.28; 1000, 4.35
5-grain tablets .....	100, .83; 500, 3.28; 1000, 6.25
Pure powder, in 1-ounce packages, per package.....	.60
Calcidin Troches .....	100, .57; 500, 2.00; 1000, 3.70

In Canada, Customs Tariff must be added to prices quoted.

Should your druggist not be stocked with Calcidin send your order direct. Delivery prepaid for cash with order. Money back if not satisfied.

For the convenience of your pharmacist, jobbers are stocked. If you prescribe, be sure to specify "Abbott's," thus guarding against worthless imitations.

**THE ABBOTT LABORATORIES**  
CHICAGO - NEW YORK

SEATTLE    SAN FRANCISCO    LOS ANGELES  
TORONTO    BOMBAY



## WHEN A TONIC IS NEEDED

the best obtainable is called for—in its composition, in its quality and character, and above all, in its capacity to promote bodily vitality and strength. In

# Gray's Glycerine Tonic Comp.

FORMULA DR. JOHN P. GRAY

the practitioner has at his command a restorative and reconstructive that justifies every confidence. Of the highest quality and constant uniformity—in spite of the drug market—and exceptional therapeutic efficiency, the use of "Grays" is a guarantee that the best possible results will be obtained in each and every case.

For over a quarter of a century "Grays" has been one of the most widely—and successfully—used remedies in atonic and debilitated conditions.

### COMPOSITION

Glycerine  
Sherry Wine  
Gentian  
Taraxacum  
Phosphoric Acid  
Carminatives

"Grays" is now  
supplied in two sizes—  
a 6 oz. prescription  
size, and the  
original 16 oz. package.

### INDICATIONS

Auto-Intoxication  
Atonic Indigestion  
Anemia  
Catarrhal Conditions  
Malnutrition  
Nervous Ailments  
General Debility

THE PURDUE FREDERICK CO., 135 Christopher St., New York

In the Treatment of

# Cystitis—Urethritis Pyelitis—Prostatitis—Bacilluria

## HELMITOL

ACTS AS

## *An Efficient Urinary Antiseptic*

Agreeable of Administration—Generally Well-Tolerated  
by the Gastro-Intestinal and Urinary Tract.

**Conveniently taken in Tablets, which readily dissolve.**

Supplied in 5 gr. tablets, bottles of 25 and 100, and in powder in ounces.

Samples and Literature supplied by

THE BAYER COMPANY, Inc.  
117 Hudson St., New York, N. Y.



# Chicago Pasteur Institute

26th YEAR

812 NORTH DEARBORN STREET

CHICAGO

FOR THE PREVENTIVE TREATMENT OF HYDROPHOBIA

ANTONIO LAGORIO, M.D. LL.D., Medical Director

G. B. BRUNO, M.D., Associate Director

FRANK A. LAGORIO, M.D., Associate Director

**Announcement**—When patients are unable to come to Institute, we can furnish physicians our course of Pasteur treatment by mail, in the State of Illinois. Telephone Superior 973.

N. B.—We have no branches and the use of our name is unauthorized.

## PASTEUR INSTITUTE of ST. LOUIS

We are prepared to furnish the Pasteur Treatment for the prevention of rabies to any physician in the United States, by *Special Delivery Mail*. We are licensed by the Treasury Department to engage in Interstate Commerce with this product.

We furnish Eighteen Treatments, by Special Delivery Mail, with one 5c glass syringe and needles, full directions and the service of our consulting department, for \$50.00 complete.

We have many Illinois physicians among our satisfied patrons. *Wire or telephone when help is needed*

## PASTEUR INSTITUTE of ST. LOUIS

R. B. H. GRADWOHL, M.D., Director

928 N. Grand Ave., St. Louis, Mo.

## DON'T USE TYPHOID VACCINE ALONE

## USE TYPHOID-PARATYPHOID VACCINE

For all immunizations, as it protects against both infections and costs no more than the typhoid vaccine alone.

### LIST No. 42

One Complete Immunization	\$0.50
One 6 Mil (cc.) Bulk Package	1.00
One 20 Mil (cc.) Bulk Package	3.00
One Hospital Package (12 immunizations)	3.50

## SWAN-MYERS COMPANY

Pharmaceutical and Biological Laboratories

INDIANAPOLIS

INDIANA, U. S. A.

GOVERNMENT LICENSE No. 58



# Mulford Antipneumococcic Serums

## For the Specific Treatment of Lobar Pneumonia

Lobar pneumonia is caused chiefly by the pneumococcus, of which there are three different fixed types and a fourth group, including possibly twelve different types.

Types I and II are responsible for about 70 per cent of cases, with an average mortality, without serum treatment, of from 25 to 30 per cent. With serum treatment the mortality of Type I has been reduced to from 5 to 8 per cent.

Type III is responsible for from 10 to 15 per cent of cases, with a death rate of 50 per cent.

Group IV is responsible for from 15 to 20 per cent of cases. These usually follow a milder course, only 10 to 15 per cent resulting fatally.

Mulford Antipneumococcic Serum Polyvalent is highly protective against pneumonia caused by Type I, and contains antibodies against Types II and III.

The serum is tested and standardized by tests on mice; 1 c.c. must protect against 500,000 fatal doses of Type I cultures.

The polyvalent serum should be used immediately on diagnosis of lobar pneumonia where type determination is impossible.

The dose is from 50 to 100 mls (c.c.) intravenously, repeated about every six to eight hours until the patient successfully passes the crisis. Most cases will require 300 mls (c.c.) or more. It is safe to administer the serum intravenously in large and repeated doses. When the serum is injected intramuscularly, the results are slower and less effective.

Mulford Antipneumococcic Serums are furnished in packages containing syringes of 20 mls (c.c.) each, and in ampuls of 50 mls (c.c.) for intravenous injection.

Mulford Specific Agglutinating Pneumococcic Serums for laboratory diagnosis are furnished for each of the three types, in 10-ml (c.c.) ampuls sufficient for about 20 tests.

Mulford Pseudo-Serobacterin Mixed is an efficient prophylactic against lobar pneumonia. It is supplied in packages of four graduated syringes, A, B, C, D strength, and in syringes of D strength separately.

Syringe A 250 million killed sensitized bacteria  
Syringe B 500 million killed sensitized bacteria  
Syringe C 1000 million killed sensitized bacteria  
Syringe D 2000 million killed sensitized bacteria

## H. K. MULFORD CO., Philadelphia, U. S. A.

Manufacturing and Biological Chemists

30532

Literature sent on request with  
full laboratory tests



## PERSONAL SERVICE

*For Owners and Prospective  
Buyers of*

## X-Ray Equipment

The special attention of all users of Electro-Medical Apparatus is directed to the John McIntosh Company, of Chicago, Milwaukee and St. Louis.

### Service

By service, we mean that any user of apparatus presented by the VICTOR ELECTRIC CORPORATION is entitled to the service of the John McIntosh Company.

Our lines cover everything in Electro-Medical Apparatus for the Physician, for the Hospital, and for the X-Ray Laboratory. If you are in need of information or service, write to the point nearest you.

At these offices you will be able to secure, in addition to Electro-Medical Apparatus, all classes of supplies used in X-Ray Laboratories, such as plates, developing materials, etc.

### JOHN McINTOSH COMPANY

30 E. Randolph Street  
CHICAGO

Marina Bldg., 306 N. Grand Ave. Merchants & Mfg's Bank Bldg.  
ST. LOUIS MILWAUKEE

## The STORM Binder and Abdominal Supporter

PATENTED



Special High Kidney Belt

MEN, WOMEN, CHILDREN and BABIES

No Whalebones. No Rubber Elastic.  
Washable as Underwear

High and Low Operations, Hernia,  
Relaxed Sacro-iliac Articulations,  
Floating Kidney, Obesity, Preg-  
nancy, Ptosis, Pertussis, etc.

Send for illustrated folder and Testimonials of Physicians.  
Mail Orders filled within Twenty-four Hours.

KATHERINE L. STORM, M. D.  
1541 Diamond St., PHILADELPHIA, PA.

## 50% Better Prevention Defense Indemnity

1. All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
2. Or his estate is sued, whether the act or omission was his own
3. Or that of any other person (not necessarily an assistant or agent),
4. All such claims arising in suits involving the collection of professional fees,
5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
6. Defense through the court of last resort and until all legal remedies are exhausted.
7. Without limit as to amount expended.
8. You have a voice in the selection of local counsel.
9. If we lose, we pay to amount specified, in addition to the unlimited defense.
10. The only contract containing all the above features and which is protection per se.

A Sample Upon Request

The  
MEDICAL PROTECTIVE COMPANY  
9<sup>th</sup> Ft. Wayne, Indiana.

Professional  
Protection, Exclusively

## A COMPLETE DIAGNOSTIC LABORATORY

WE MAKE EVERY LABORATORY TEST OF MERIT:

{ WASSERMANN, controlled by the  
{ HECHT-GRADWOHL, the best test for syphilis.

GONORRHEAL BLOOD TEST.

TUBERCULOSIS BLOOD TEST.

All other examinations, Urine, Feces, Stomach Contents, Sputum, Blood Films, Blood Cultures, Vaccines, Blood Chemical Test for Sugar, Urea, Uric Acid and Creatinine.

Write for Free CONTAINERS, SLIDES, CULTURE TUBES AND LITERATURE

GRADWOHL BIOLOGICAL LABORATORIES, 928 N. Grand Avenue, St. Louis, Mo.

R. B. H. GRADWOHL, M. D., Director



# Quality Efficiency Uniformity

RHEUMATISM NEURALGIA SCIATICA TONSILLITIS LUMBAGO  
HEAVY COLDS GRIPPE GOUT EXCESS OF URIC ACID

**Tongaline Liquid**

Four-ounce Bottle    Eight-ounce Bottle    Five-pint Bottle

**Tongaline Tablets    Tongaline and Lithia Tablets**  
**Tongaline and Quinine Tablets**

Box, Fifty Tablets                      Box, One Hundred Tablets

Samples on Application    MELLIER DRUG COMPANY, Saint Louis

## Send Your Specimens for Diagnosis

TO THE

# Columbus Medical Laboratory

ESTABLISHED 1893

31 N. State Street - - - Chicago, Illinois

**WASSERMANN** and other serum tests.

**AUTOGENOUS VACCINES** prepared.

**TISSUE** from surgical cases for diagnosis.

Urine, Sputum and Blood tests.

Post Mortem and Medico Legal Advice.

Water, Food and Drug Analyses.

***Dr. Adolph Gerhrmann, Pres.***

**Central 2740**

**Nights, Oakland 6938**



## LISTERINE

A trustworthy, unirritating solution composed of volatile and non-volatile antiseptics; extensively and satisfactorily employed in dilution up to 25% as a wet dressing for surgical and accidental wounds.

## LISTERINE

Suitably diluted, applied by injection, douche or spray, often serves a useful purpose in catarrhs and conditions involving hyper-secretion from mucous surfaces. It is an efficient deodorizer.

## LISTERINE

On account of its boric and benzoic acid constituents, forms a suitable lotion in dermatitis following vaccination. In various cutaneous disorders, its use allays excessive itching or irritation, and promotes cleanliness while exercising its antiseptic effect.

Descriptive literature on request

# Lambert Pharmacal Company

Twenty-first and Locust Streets

St. Louis, Mo., U. S. A.

## RADIUM FOR RENT

BY

### THE PHYSICIANS' RADIUM ASSOCIATION of CHICAGO

(Incorporated under the laws of Illinois: "Not for profit")

Any case, in which radium therapy is indicated, is provided for in our large assortment of radium applicators. Loaned on application from any responsible physician, case having first been passed on by us after receipt of adequate information. Certain cases may be sent to our office for treatment. Moderate rental fees charged. For further particulars address

#### THE PHYSICIANS' RADIUM ASSOCIATION

1104 Tower Bldg., 6 N. Michigan Ave.,

Telephones: Randolph 6897-6898

CHICAGO

Board of Directors: WILLIAM L. BAUM, M.D.; THOMAS J. WATKINS, M.D.; FREDERICK MENGE, M.D.; WALTER S. BARNES, M.D.; ALBERT WOELFEL, M.D. Managing Director: ALBERT WOELFEL, M.D.



# CHICAGO LABORATORY CLINICAL ANALYTICAL

Marshall Field Annex Bldg.  
25 E Washington St.

CHICAGO

Established 1904

Phone Randolph 3610

**M**ODERN equipment, combined with years of clinical and analytical experience, is at your service. Our reputation and names stand back of our work.

Serological Tests. Pathological Examination of Tissue. Autogenous Vaccines. Complement Fixation Test for Gonorrhea, Sputum, Smears, Pus, etc. Urinalysis, Complete Chemical and Microscopical. All work at moderate prices. Write for our fee table with instructions for sending specimens. Sterile containers and culture media on request. Prompt reports by mail, telephone or telegraph. During the summer season we urge the importance of an analysis of well waters and other sources of supply.

**RALPH W. WEBSTER, M.D., Ph.D.**

*Director of Chemical Department*

**THOMAS L. DAGG, M.D.**

*Director of Pathological Department*

**C. CHURCHILL CROY, M.D.**

*Director of Bacteriological Department*





# H O R M O T O N E

## The Dynamogenic Hormone Tonic for Asthenic Conditions

HORMOTONE has been used with success in the treatment of many intractable cases. It is primarily indicated in adrenal insufficiency, but is also useful in functional impotence, sterility due to ovarian insufficiency, amenorrhea, dysmenorrhea and menopausal disorders.

The Fatigue Syndrome Yields to  
Hormotone as to No Other Agent

DOSE: *One or two tablets three times daily before meals.*

In Neurasthenia associated with High Blood Pressure use

**HORMOTONE WITHOUT PITUITARY**

**G. W. CARNRICK CO., 31 Sullivan Street, NEW YORK**



Trade Mark of  
The Society of Chemical  
Industry in Basle,  
Switzerland

## *The premier digitalis*

is the digitalis which gives you  
results when others have failed

## DIGIFOLINE CIBA

will stand this test

according to the actual experiences  
of physicians

*Tablets and Ampoules*

Send for Literature

**A. KLIPSTEIN & COMPANY**

New York



What's in a taste when it comes to selecting a food for invalids?

## Palatability

is a great big important word in the dietary of the sick.

Is the food you are using *appe-tizing*, does it *attract*, does your sick patient look forward to his meal because *he can take it with relish*?

In the answer to these questions lies one of the secrets of success in feeding the sick.

## Cocoa

lends a delicate and attractive flavor to this rare blend of malt, milk and eggs called

# OVALTINE

**A Complete Food Beverage**

For samples and complete analysis, write to  
**THE WANDER COMPANY**  
 Dept. 4 23 North Franklin Street, Chicago  
 Established 1885 by Dr. A. Wander Co., Ltd., Berne, Switzerland. Ovaltine is used by leading European physicians and dietitians, also in recuperating bases of allied armies.





# ILLINOIS STATE MEDICAL SOCIETY

## SECTION OFFICERS AND COMMITTEES

### SECTION ON SURGERY

John S. Nagel, Chairman.....Chicago  
H. A. Millard, Secretary.....Minonk

### SECTION ON MEDICINE

C. Martin Wood, Chairman.....Decatur  
S. R. Slaymaker, Secretary.....Chicago

### SECRETARIES' CONFERENCE

Flint Bondurant, President.....Cairo

F. C. Gale, Secretary.....Pekin

### SECTION ON PUBLIC HEALTH AND HYGIENE

Grace Campbell, Chairman.....Chicago  
W. E. Park, Secretary.....Rockford

### SECTION ON EYE, EAR, NOSE AND THROAT

J. Sheldon Clark, Chairman.....Freeport  
Wesley H. Peck, Secretary.....Chicago

## COUNTY SOCIETIES

This list is corrected in accordance with the best information obtainable at the date of going to press.  
County Secretaries are requested to notify The Journal of any changes or errors.

### Adams County

J. L. Aleshire, Pres.....Plainville  
Elizabeth B. Ball, Secy.....Quincy

### Alexander County

J. W. Dunn, Pres.....Cairo  
R. E. Barrows, Secy.-Treas.....Cairo

### Bond County

W. T. Easley, Pres.....Greenville  
J. C. Wilson, Secy.....Greenville

### Boone County

Geo. Markley, Pres.....Poplar Grove  
H. E. Delavergne, Secy.....Belvidere

### Brown County

D. R. Peters, Pres.....Mt. Sterling  
E. C. Allworth, Secy.-Treas.....Mt. Sterling

### Bureau County

C. C. Barrett, Pres.....Princeton  
M. A. Nix, Secy.....Princeton

### Calhoun County

W. A. Skeel, Pres.....Kampsville  
J. H. Peisker, Secy.....Hardin

### Carroll County

G. E. Merchon, Pres.....Mt. Carroll  
R. B. Rice, Secy.-Treas.....Mt. Carroll

### Cass County

C. E. Soule, Pres.....Beardstown  
W. R. Blackburn, Secy.....Virginia

### Champaign County

O. O. Stanley, Pres.....Urbana  
J. C. Dallenbach, Secy.....Champaign

### Christian County

R. C. Danford, Pres.....Pana  
S. B. Herdman, Secy.....Taylorville

### Clark County

H. C. Houser, Pres.....Westfield  
L. J. Weir, Secy.....Marshall

### Clay County

C. E. Duncan, Pres.....Flora  
R. D. Finch, Secy.....Flora

### Clinton County

Orvil O'Neal, Pres.....Shattuc  
J. Q. Roane, Secy.....Carlyle

### Coles-Cumberland County

Wm. Smith, Pres.....Toledo  
R. H. Craig, Secy.-Treas.....Charleston

(Continued on page 33)

### Cook County

Chas. E. Humiston, Pres.....Chicago  
J. V. Fowler, Secy.....Chicago

### Crawford County

A. G. Brooks, Pres.....Stoy  
C. E. Price, Secy.....Robinson

### DeKalb County

Clifford E. Smith, Pres.....De Kalb  
L. E. Barton, Secy.....Malta

### De Witt County

J. M. Wilcox, Pres.....Clinton  
S. L. Thorpe, Secy.-Treas.....Clinton

### Douglas County

Floyd C. Phillips, Pres.....Arthur  
Walter C. Blaine, Secy.....Tuscola

### Du Page County

(Affiliated with Cook County)

### Edgar County

Wm. A. Buchanan, Pres.....Paris  
George H. Hunt, Secy.....Paris

### Edwards County

W. E. Buxton, Pres.....West Salem  
R. L. Moter, Secy.....Albion

### Effingham County

Frank W. Goodell, Pres.....Effingham  
F. Buckmaster, Secy.....Effingham

### Fayette County

L. L. Morey, Pres.....Vandalia  
Mark Greer, Secy.....Vandalia

### Franklin County

Wm. H. Smith, Pres.....Benton  
Edgar Austin, Secy.....Benton

### Fulton County

W. L. Crouch, Pres.....Fairview  
D. S. Ray, Secy.....Cuba

### Gallatin County

J. W. Bowling, Pres.....Shawneetown  
A. B. Capel, Secy.....Shawneetown

### Greene County

O. L. Edwards, Pres.....Roodhouse  
L. O. Frech, Secy.-Treas.....White Hall

### Grundy County

Roscoe Whitman, Pres.....Morris  
F. C. Bowker, Secy.....Morris

### Hamilton County

E. S. Hall, Pres.....McLeansboro  
P. M. Nation, Secy.....McLeansboro

### Hancock County

Blair Kelley, Pres.....Ferris  
S. M. Parr, Secy.....Carthage

### Hardin County

W. J. J. Paris, Pres.....Rosiclare  
F. A. Jones, Secy.....Rosiclare

### Henderson County

W. J. Emerson, Pres.....Carman  
J. P. Riggs, Secy.....Media

### Henry County

H. N. Heflin, Pres.....Kewanee  
P. J. McDermott, Secy.....Kewanee

### Iroquois-Ford District

O. O. Hall, Pres.....Milford  
W. L. Cottingham, Secy.....Paxton

### Jackson County

W. A. Brandon, Pres.....Carbondale  
H. G. Horstman, Secy.....Murphysboro

### Jasper County

John Hamilton, Pres.....Bogota  
James P. Prestley, Secy.-Treas.....Newton

### Jefferson County

E. E. Edmondson, Pres.....Mt. Vernon  
Andy Hall, Secy.....Mt. Vernon

### Jersey County

H. R. Bohannon, Pres.....Jerseyville  
H. F. Threkeld, Secy.....Jerseyville

### Jo Daviess County

U. S. G. Keller, Pres.....Warren  
T. J. Stafford, Secy.....Stockton

### Johnson County

C. D. Nobles, Pres.....Buncombe  
H. W. Walker, Secy.....Grantsburg

### Kane County

A. E. Diller, Pres.....Aurora  
L. J. Hughes, Secy.-Treas.....Elgin

### Kankakee County

C. W. Geiger, Pres.....Kankakee  
E. S. Hamilton, Secy.-Treas.....Kankakee

### Kendall County

R. A. Schaefer, Pres.....Plano  
Robt. McClland, Secy.....Yorkville

### Knox County

A. C. Keener, Pres.....Altoona  
G. S. Bower, Secy.....Galesburg

### Lake County

J. M. Palmer, Pres.....Grays Lake  
C. S. Ambrose, Secy.-Treas.....Waukegan

### La Salle County

Geo. K. Wilson, Pres.....Streator  
E. E. Perisho, Secy.....Streator

(Continued on page 30)

# Chloretone

A broadly serviceable hypnotic and sedative

---

Chloretone induces natural sleep.

It acts as a sedative to the cerebral, gastric and vomiting centers.

It does not depress the heart.

It does not disturb the digestive functions.

It produces no objectionable after-effects.

It does not cause habit-formation.

## INDICATIONS.

Insomnia of pain.

Insomnia of mental strain or worry.

Insomnia of nervous diseases.

Insomnia of old age.

Insomnia of tuberculosis.

Alcoholism, delirium tremens, etc.

Acute mania.

Puerperal mania.

Periodic mania.

Senile dementia.

Agitated melancholia.

Motor excitement of general paresis.

Spasmodic affections, as asthma, epilepsy, chorea, pertussis, tetanus, etc.

Nausea and vomiting of anesthesia.

Seasickness.

The pains of pregnancy.

Vomiting of pregnancy.

Chloretone has been pronounced the most satisfactory hypnotic and sedative available to the medical profession.

CHLORETONE: Ounce vials.

CHLORETONE CAPSULES: 3-grain, bottles of 100 and 500.

CHLORETONE CAPSULES: 5-grain, bottles of 100 and 500.

Dose, 3 to 15 grains.

Home Offices and Laboratories,  
Detroit, Michigan.

**Parke, Davis & Co.**



# FELLOWS' SYRUP

Differs from other preparations of the Hypophosphites. Leading Clinicians in all parts of the world have recognized this important fact. **HAVE YOU?**

**TO INSURE RESULTS,  
Prescribe the Genuine**

**R<sub>x</sub> Syr. Hypophos. Comp. FELLOWS'**

**REJECT** < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL MANUFACTURING CO. LTD.  
225 CHRISTOPHER ST.  
NEW YORK

## TUBERCULOSIS - ALBUQUERQUE, NEW MEXICO

Climatic Conditions Unsurpassed  
Altitude 5000 feet  
In the LAND OF SUNSHINE

Experienced Medical Supervision  
Trained Nurses in Constant Attendance  
All Approved Therapeutic Measures Employed

### The Murphey Sanatorium



A High-Class Institution for the Treatment of Tuberculosis.  
Forty Rooms—Ten with private bath—Thirty with bath between each two rooms.  
Every Room has a Private Sleeping Porch.  
Located in the midst of beautiful Mountain Scenery.

Rates: \$18.50 to  
\$25.00 per week  
**NO EXTRAS**

DESCRIPTIVE BOOKLET AND FULL INFORMATION MAILED ON REQUEST

**THE MURPHEY SANATORIUM,**

**Albuquerque, New Mexico**

**W. T. MURPHEY, M. D.,**  
MEDICAL DIRECTOR

**MRS. HATTIE SOWER,**  
SUP'T.

**DAVID A. SPEAR, M. D.**  
BACTERIOLOGIST



## THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILL.

is devoid of the "institutional atmosphere."  
It is designed and conducted to meet the  
requirements of patients who demand



### Privacy and Individual Attention

*Special consideration is given  
to Quality of Service*

Rates \$25.00 to \$35.00 per week

H. V. PETTIT, Supt.

OTTAWA

ILLINOIS



## Chicago Fresh Air Hospital

(FOR TUBERCULOSIS)

*At Rogers Park, Chicago, Illinois*

Patients received in *all* stages of Pulmonary Con-  
sumption.

Private Rooms and Board, \$25.00 per week.

Open Porch and two-bed Rooms, with Board, \$15.00.

**Tuberculin Treatment**  
**Artificial Pneumo-Thorax**

**DR. ETHAN A. GRAY,**

*Medical Superintendent.*

## THE POTTENGER SANATORIUM

MONROVIA, CALIFORNIA

FOR DISEASES OF THE LUNGS AND THROAT



A thoroughly equipped institution for the  
scientific treatment of tuberculosis. High  
class accommodations. Ideal all-year-  
round climate. Surrounded by orange  
groves and beautiful mountain scenery,  
45 minutes from Los Angeles.

F. M. POTTENGER, A.M., M.D. LL.D.,  
Medical Director.

J. E. POTTENGER, A.B., M.D., Assistant  
Medical Director and Chief of Laboratory.

GEORGE H. EVANS, M.D. San Francisco,  
Medical Consultant.

For Particulars, Address THE POTTENGER SANATORIUM, Monrovia, California  
LOS ANGELES OFFICE, 1100-1101 TITLE INSURANCE BUILDING, FIFTH AND SPRING STREETS



## EDWARD SANATORIUM

For the Treatment of Incipient Pulmonary Tuberculosis  
NAPERVILLE, ILLINOIS



Established 1907. Attractive surroundings. Large grounds. Open-air sleeping cottages and Infirmary with all appointments necessary for the comfort of the patients.

Modern hygienic-dietetic methods of treatment. Medical and laboratory facilities. Resident physicians and trained nurses.

Tuberculin Treatment and Artificial Pneumothorax in suitable cases

*For detailed information, rates and rules of admission, apply to*

CHICAGO TUBERCULOSIS INSTITUTE, 8 South Dearborn Street, Room 1212, CHICAGO, ILL.



On Main Line Chicago, Milwaukee & St. Paul Railway  
30 Miles West of Milwaukee

## Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

For Nervous and Mild Mental Diseases

Building New, Most Approved Fireproof Construction

ARTHUR W. ROGERS, M.D., Resident Physician in Charge  
LONG DISTANCE TELEPHONE

Built and equipped to supply the demand of the neurasthenic, borderline and undisturbed mental case for a high class home free from contact with the palpable insane, and devoid of the institutional atmosphere. Forty-one acres of natural park in the heart of the famous Wisconsin Lake Resort Region. Rural environment, yet readily accessible. The new building has been designed to encompass every requirement of modern sanitarium construction, the comfort and welfare of the patient having been provided for in every respect. The bath department is unusually complete and up-to-date. Number of patients limited, assuring the personal attention of the resident physician in charge.

*Trains meet at Oconomowoc on request.*

## The Norbury Sanatorium

JACKSONVILLE

:-:

ILLINOIS

*Established by Dr. Frank P. Norbury, 1901*

Incorporated and Licensed

**"Maplewood" — "Maplecrest"**

**Capacity Forty Beds**

**P**PRIVATE RESIDENTIAL HOMES for the treatment of Nervous and Mental Disorders. Especial attention given to the treatment, by approved modern methods, of the Psychoneuroses, Exhaustion states and selected Psychoses and addiction cases.

Dr. FRANK P. NORBURY,  
Medical Director. (Late  
Alienist, State Board of Ad-  
ministration. Formerly  
Supt. Kankakee State Hos-  
pital.)

Dr. ALBERT H. DOLLEAR  
Superintendent (Late  
Clinical Asst., State Psycho-  
pathic Institute, Kankakee.  
Formerly Asst. Supt., Water-  
town State Hospital.)

Address all communications, THE NORBURY SANATORIUM, 806 South Daimond Street, JACKSONVILLE, ILLINOIS  
Springfield Office, DR. FRANK P. NORBURY, 407 South Seventh Street, by appointment

# Kenilworth Sanitarium

(Established 1905)

**KENILWORTH, ILLINOIS**

(C. & N.-W. Railway. Six miles north of Chicago)



All correspondence should be addressed to Kenilworth Sanitarium, Kenilworth, Illinois

Built and equipped for the treatment of nervous and mental diseases. Approved diagnostic and therapeutic methods. An adequate night nursing service maintained. Sound proof rooms with forced ventilation. Elegant appointments. Bath rooms en suite, steam heating, electric lighting, electric elevator.

## Resident Medical Staff

Ella Blackburn, M. D., Sanger Brown, M. D., Sherman Brown, M. D.  
Chicago Office: 59 East Madison Street  
Telephone: Randolph 5794. Consultation by appointment only



Established 1867

# BELLEVUE SANITARIUM

BATAVIA, ILLINOIS  
near CHICAGO

*For Nervous and Mental Diseases  
of Women Only*

Restful, homelike and accessible. Treatment modern,  
scientific and ethical.

TERMS MODERATE.

WRITE FOR BOOKLET

# Nasal Spraying Outdone

## The V-E-M Applicator—

a hard rubber attachment that screws onto the collapsible tube "shoots" ointment up into the nose, where it stays for hours. Sprayed fluids quickly run down and out. This slick little device insures most effective local medication in

**Coryza, Rhinitis**

**Catarrh, Hay Fever**

Free with every tube of  
V-E-M Ung. Eucalyptol Compound  
Send 10 cents for a tube of V-E-M and  
the Applicator (regular price 50 cents)



Schoonmaker Laboratories, Inc. 70 East 42nd St.  
New York

Buy from our advertisers.  
If they don't give as good  
or better value than others,  
kick to us—

*We'll do the rest*



BUILDING ABSOLUTELY FIRE-PROOF

# Waukesha Springs Sanitarium

FOR THE CARE AND TREATMENT OF  
**NERVOUS DISEASES**

BYRON M. CAPLES, M.D., Superintendent

Waukesha

::

Wisconsin



# NEURONHURST

Dr. W. B. Fletcher's Sanatorium



**For Treatment of Mental and Nervous Diseases, Including Legally Committed and Voluntary Cases**  
Well equipped with all facilities for the care and treatment of all forms of mental and nervous diseases, inebriety, drug addiction and those requiring recuperation and rest. Gynecological department is in charge of skilled women physicians. All approved forms of Hydrotherapy, Balneotherapy, Massage, Swedish Movements, etc. All forms of Electrical Treatments. Phototherapy, High Frequency and X-Ray work. A strictly ethical institution. Correspondence with physicians invited. For particulars and terms, address:  
**DR. MARY A. SPINK, Superintendent. Long Distance Telephones 1140 E. Market St., INDIANAPOLIS**

## DR. SIDNEY D. WILGUS

Retiring Superintendent of Kankakee State Hospital, also former Superintendent of Elgin State Hospital.

### Begs to Announce

that he has purchased a Sanitarium at Rockford, Ill. (The Ransom)

and is prepared to give personal care and attention to mental and nervous cases and drug addictions. Modern features having been added, the equipment is qualified to give up-to-date treatment. Also tennis, croquet, boating, and other out-door exercises are prescribed. A nine-hole golf course is near by. Correspondence solicited, or, to save time, telephone: Long Distance, Rockford 3767, and reverse the charges. On request patients are met at any train with an automobile.

Mail address, **DR. SIDNEY D. WILGUS, Box 304, Rockford, Ill.**

Chicago Office. Thursday Mornings until 12 at Suite 1803, 25 E. Washington St.

And by appointment



ENTRANCE

WEST HOUSE

OFFICE AND BATH HOUSE

PSYCHOPATHIC HOSPITAL

GYMNASIUM

Established  
in 1884

## THE MILWAUKEE SANITARIUM

For Mental and Nervous Diseases

Wauwatosa,  
Wis.

Located at Wauwatosa (a suburb of Milwaukee) on C. M. & St. P. Ry., 2 1/4 hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two line street cars. Complete facilities and equipment as heretofore announced. Psychopathic Hospital: Continuous baths, fireproof building, separate grounds. West House: Rooms en suite with private baths. Gymnasium and Recreation Building: Physical culture, "Zander" machines, shower baths. Modern Bath House: Hydrotherapy, Electrotherapy, Mechanotherapy. 30 acres beautiful all, forest and lawns. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

**RICHARD DEWEY, A. M., M. D.**

**EUGENE CHANEY, A. M., M. D.**

**WILLIAM T. KRADWELL, M. D.**

CHICAGO OFFICE: Marshall Field Annex, 25 E. Washington Street, Room 1823, Wednesdays 1 to 3 P. M. (except in July and August) Tel. Centra 1162  
MILWAUKEE OFFICE: Goldsmith Building, Room 504. Consultation by appointment. Tel. Main 81.  
TELEPHONE SANITARIUM OFFICE: Milwaukee-Wauwatosa 16.



## The Cincinnati Sanitarium For Mental and Nervous Diseases

Incorporated 1873

A strictly modern hospital fully equipped for the scientific treatment of nervous and mental affections. Situation retired and accessible. For details write for descriptive pamphlet.

F. W. Langdon, M.D., Medical Director

B. A. Williams, M.D., Resident Physician

Emerson A. North, M.D., Resident Physician

H. P. COLLINS, Business Manager, Box No. 4, College Hill, Cincinnati, Ohio



ABSOLUTELY FIREPROOF BUILDING

LESS THAN THREE HOURS FROM CHICAGO

## Mud Baths

For the treatment of RHEUMATISM, Nervousness, Kidney, Liver and Skin Diseases, and all ailments requiring elimination and relaxation. Location beautiful; climate healthful; 80 acres of private grounds.

DR. AUGUSTUS S. GILLES, Medical Director

*Correspondence with physicians solicited*

For rates, literature and reservations, address

**Waukesha Moor (Mud) Bath Co.**

WAUKESHA, WISCONSIN

## "BEVERLY FARM"

Home and School for Nervous and Backward Children

5 buildings, schools and gymnasium, 176 acres of land, 40 acres of timber, containing beautiful Camp Belle log cabin for recreation; separate buildings for boys and also children under 10 years of age. Thirty-six years experience. Consultations at home if desired. Publicity avoided. Address all communications to

**W. H. C. SMITH, M.D., Superintendent**  
GODFREY, MADISON CO., ILLINOIS

*"Beverly Farm" was awarded Grand Prize by Committee of Awards of the Louisiana Purchase Exposition*

## The Peoria Mud Baths

We insist that your patients can eliminate as freely and as effectually in Illinois as in any other State in the Union.

Strict ethical relations. Thoroughly equipped. Have had thousands of patients.

DR. T. W. GILLESPIE, Medical Supt.

**SULPHUR SPRINGS SANITARIUM**  
215-217 N. Adams St. Peoria, Illinois





# DR. WEIRICK'S SANITARIUM

FORMERLY DR. BROUGHTON'S SANITARIUM  
ESTABLISHED IN 1901

**For Opium, Morphine  
Cocaine and Other Drug  
Addictions, Including  
Alcohol and Special  
Nervous Cases**

Methods easy, regular, humane.  
Good heat, light, water, help, board,  
etc. Number limited to 44. A well  
kept home. Nervous-Mental De-  
partment in charge of Dr. W. L.  
Ransom. Address

**DR. G. A. WEIRICK**  
SUPERINTENDENT

**2007 South Main Street**

Phone 536  
**Rockford - - - Illinois**

## PETTEY & WALLACE 958 S. Fifth Street MEMPHIS, TENN. **SANITARIUM**



FOR THE TREATMENT  
OF

**Drug Addiction, Alcoholism,  
Mental and Nervous Diseases**

A quiet, home-like, private, high-  
class institution. Licensed. Strictly  
ethical. Complete equipment. Best  
accommodations.

Resident physician and trained  
nurses.

Drug patients treated by Dr.  
Petty's original method.

Detached building for mental  
patients.

# The Peoria Sanatorium

A private Sanatorium for the treatment of Nervous and Mental Diseases,  
by modern methods. Flowing Sulphur Spring. Licensed by the State.

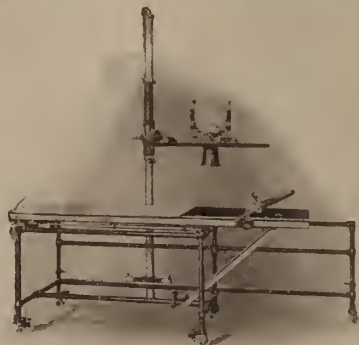
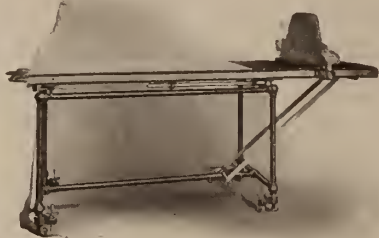
**DRUG AND LIQUOR HABITS TREATED**

WRITE FOR BOOKLET

**Director, DR. GEO. W. MICHELL**

**PHONE MAIN 225.**

**Address, 106 N. Glen Oak, PEORIA, ILL.**



## Victor Roentgen Tables and Stands

are manufactured in a variety of designs and combinations so as to permit of discrimination in selecting an apparatus to fit the needs of the individual laboratory.

Literature, illustrating and describing the complete line of Victor roentgen apparatus will be gladly sent on request—and without obligation.

### VICTOR ELECTRIC CORPORATION

CHICAGO  
236 S. Robey St.

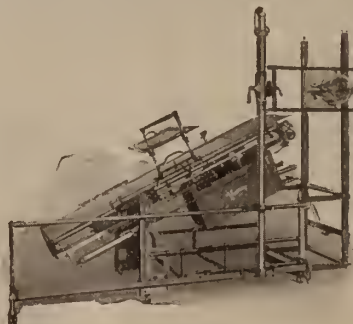
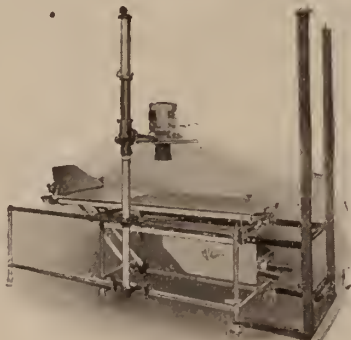
CAMBRIDGE, MASS.  
66 Broadway

NEW YORK  
131 E. 23rd St.

#### *Territorial Sales Distributors:*

CHICAGO: Victor Electric Corporation  
236 S. Robey St.

CHICAGO: John McIntosh Co.  
30 E. Randolph St.  
ST. LOUIS, MO.  
John McIntosh Co.  
4485 Olive St.





**SURGODINE IS**

*all iodine*; there are no side salts to hamper the ideal iodine antiseptic action

**SURGODINE DOES**

quickly produce the full iodine effects always desired and demanded by surgeons.

**SURGODINE DOES NOT**

cause any irritation when freely applied—properly diluted—to an open wound.

---

**Sharp & Dohme**

Since 1860  
Makers of Quality Pharmacals

---

In 4 ozs. and pints at  
leading pharmacies

# The Standard Laboratories

## MANUFACTURING PHARMACISTS

---

**Q**UALITY, SERVICE and PRICE of drugs are necessary to success in the practice of medicine. Our products are manufactured from the purest drugs and chemicals obtainable, under the most skillful supervision, and the service is prompt. Our prices are the lowest consistent with quality.

**YOUR ORDERS SOLICITED**

**2626-2628 Shields Avenue - CHICAGO, ILL.**

Phone Calumet 6090

# RADIUM THERAPY

## UTERINE HEMORRHAGES

Malignant and Benign Growths  
TREATED WITH RADIUM

*Perfected Mechanical Devices for the Scientific Application to Bladder,  
Rectum, Oesophagus, Throat and Post-nasal Space.*

**REFERRED CASES WILL REMAIN UNDER THE GENERAL SUPERVISION OF  
THE ATTENDING PHYSICIAN**

C. W. HANFORD, M. D.

Room 1010  
Columbus Memorial Building  
**31 NO. STATE STREET**

Phone MAJESTIC **7330**  
HOURS: 9 A. M. to 12 M.  
Afternoons by Appointment

## PRESCRIPTION SERVICE THAT SATISFIES

The service that firmly holds customers and constantly attracts new ones,  
is SERVICE that SATISFIES.

The facilities of

**THE WHITE-HAINES OPTICAL CO.**

are equal to the severest test.

ACCURACY is our first consideration.

Prompt Deliveries consistent with accuracy is our second consideration.  
Our ability to handle a large volume of work promptly is worthy of your  
consideration.

We are Headquarters for Punktals, Kryptoks, Ultex one-piece, Naktic  
and Korectal (Trade Mark Reg.) lenses.

Try our "SERVICE THAT SATISFIES"

**THE WHITE-HAINES OPTICAL CO.**

COLUMBUS, O.    INDIANAPOLIS, IND.    SPRINGFIELD, ILL.



# Chicago College of Medicine and Surgery

**MEDICAL  
DEPARTMENT OF  
VALPARAISO  
UNIVERSITY**



**Main College Building and Willard Hospital**

**702-706  
SO. LINCOLN ST.  
CHICAGO, ILL.**

This College has an enrollment of 600 students. The Laboratory and Hospital facilities are abundant.  
The Faculty consists of men who have distinguished themselves as medical educators.  
The College is not burdened with debts and is therefore able to expend all of its income upon the courses of instruction.  
The Calendar year is divided into three semesters of four months each. The Fall semester begins on the last Tuesday in September. The Winter semester begins on the first Monday in February. The Summer semester begins on the first Monday in May.

*For catalogue or further information address*

**J. NEWTON ROE, Secretary**

**706 S. Lincoln St., Chicago, Ill.**

## Chicago Eye, Ear, Nose and Throat College

**A Post-Graduate School for Prac-  
titioners of Medicine**

**235 W. Washington Street  
Chicago, Ill.**

**Catalogue on Application**

## Chicago Maternity Hospital and Training School for Nurses

**ACCOMMODATES 25 PATIENTS  
RATES: \$10.00 to \$25.00 PER WEEK**

Well infants cared for in nursery for \$5.00 per week.  
Training School for Obstetrical and Infants' nurses.

**Address**

**EFFA V. DAVIS, M.D., 2314 N. Clark St., Chicago**

## Home Training In Nursing



We offer a thorough extension course to beginners and also to practical nurses wishing to perfect themselves in the theory and science of nursing.

There is in every community a demand for competent nurses — women physically qualified and possessing natural ability, who for various reasons cannot leave home to get their training. Through the aid of the very thorough system of instruction used by this school for a period of sixteen years, we have trained hundreds of women who have "made good" as practical nurses. In fact our graduates adapt themselves to the inconveniences of private nursing more readily than the hospital-trained nurse. They are loyal to the home doctor, whose co-operation has made their success possible.

Reputable physicians are invited to investigate our methods and co-operate with us by sending the names of earnest women who in their estimation would make desirable applicants.

Tuition fees very reasonable—small payment plan. Write for the Sixteenth Annual Announcement. Address

**Karen Esmann, Registrar  
CHICAGO SCHOOL OF NURSING  
116 S. Michigan Blvd., Chicago, Ill.**

# Coöperative Malpractice Insurance

## Limited to Members of Recognized Medical Societies

### Group Form Plan—

originated and issued only by Aetna Life Insurance Company to provide real protection and service on a common sense basis.

### This Means Protection—

against loss arising from claims based upon any injury to a patient occurring in the lawful practice of the Assured's profession. No limitation on reason for making claim.

### Avoids Technicalities—

furnishes complete defense; also indemnity, \$5,000 for one injury; \$15,000 total all judgments account of each year's acts.

### ABSOLUTE SECURITY

### Aetna Attorneys—

(Specialists in personal injury claims) always available to Assured both before and after claim is made, without extra charge.

### Compromises—

the Aetna prefers to defend suit to the highest court. Cannot settle without consent of Assured and approval of three members of the Group.

### Appeal Bonds Furnished—

If necessary in defending suit (up to limit specified in policy) without cost or deposit of collateral—a radical departure of real value to the Assured.

**SURPLUS TO POLICYHOLDERS, \$18,985,333.30**

# AETNA-IZE

Write or phone Aetna Life Insurance Company, Local Agent, or  
George Tramel, Manager, Insurance Exchange Building, Chicago, Illinois

#### Lawrence County

H. V. Davis, Pres.....Lawrenceville  
F. F. Petty, Secy.....Lawrenceville

#### Lee County

E. B. Owens, Pres.....Dixon  
C. G. Poole, Secy.....Compton

#### Livingston County

E. G. Beatty, Pres.....Pontiac  
John Ross, Secy.....Pontiac

#### Logan County

W. W. Coleman, Pres.....Lincoln  
H. S. Oyler, Secy.....Lincoln

#### McDonough County

E. R. Miner, Pres.....Macomb  
Geo. S. Duntley, Secy.....Bushnell

#### McHenry County

N. L. Seelye, Pres.....Harvard  
Hyde West, Secy.....Woodstock

#### McLean County

Frank C. Fisher, Pres.....Bloomington  
Bernice Curry, Secy.....Bloomington

#### Macon County

F. J. Mittan, Pres.....Decatur  
C. E. Hildreth, Secy.....Decatur

#### Macoupin County

G. E. Hill, Pres.....Girard  
T. D. Doan, Secy.....Scottville

#### Madison County

J. Barnard Hastings.....Alton  
E. W. Fiegenbaum, Secy.....Edwardsville

#### Marion County

W. W. Murfin, Pres.....Patoka  
J. M. Gambll, Secy.....Centralia

#### Marshall-Putnam County

R. R. Eddington, Pres.....Lacon  
R. L. Eddington, Secy.....Lacon

#### Mason County

H. O. Rogier, Pres.....Mason City  
W. R. Grant, Secy.....Easton

#### Massac County

J. A. Orr, Pres.....Metropolis  
J. A. Helm, Secy.....Metropolis

#### Menard County

H. E. Wilkins, Pres.....Petersburg  
H. P. Moulton, Secy.....Petersburg

#### Mercer County

C. M. Murrell, Pres.....Mathersville  
A. N. Mackey, Secy.....Aledo

#### Monroe County

S. Kohlenbach, Pres.....Columbia  
L. Adelsberger, Secy.....Waterloo

#### Montgomery County

C. H. Lockhart, Pres.....Witt  
G. W. Cox, Secy.....Litchfield

#### Morgan County

G. R. Bradley, Pres.....Jacksonville  
W. L. Frank, Secy.....Jacksonville

#### Moultrie County

C. W. Taylor, Pres.....Bethany  
O. M. Williamson, Secy.....Sullivan

#### Ogle County

A. H. Beebe, Pres.....Stillman Valley  
J. T. Kretsinger, Secy.....Leaf River

#### Peoria City Medical Society

O. B. Will, Pres.....Peoria  
Hugh Cooper, Secy-Treas.....Peoria

#### Perry County

J. S. Templeton, Pres.....Pickneyville  
J. D. Byrne, Secy.....Du Quoin

#### Piatt County

J. G. Lamb, Pres.....Cerro Gordo  
St. Clair Vance, Secy.....Bement

(Continued on page 33)



# INDEX TO ADVERTISERS

Abbott Laboratories.....	7
Aetna Life Insurance Co.....	30
Bayer Company.....	8
Bellevue Sanitarium.....	22
Beverly Farm School.....	24
Carnrick, G. W., Co.....	15
Chicago College of Medicine and Surgery.....	29
Chicago Eye, Nose & Throat College.....	29
Chicago Fresh Air Hospital.....	20
Chicago Laboratory.....	14
Chicago Maternity Hospital.....	29
Chicago Pasteur Institute.....	9
Chicago School of Nursing.....	29
Cincinnati Sanitarium.....	24
College of Medicine, Univ. of Ill.....	
Columbus Medical Laboratory.....	12
Crittenton, Chas. N., Co.....	
Edward Sanatorium.....	21
Fellows Medical Mfg. Co.....	19
Fletcher's Sanatorium.....	23
Gradwohl Biological Laboratories.....	12
Hanford, Dr. C. W.....	28
Horlick's Malted Milk Co.....	2
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Laboratory of Pathology and Bacteriology.....	2
Lambert Pharmaceutical Company.....	13
Lederle Antitoxin Laboratory.....	35
Leuzarder & Co.....	26
Maltbie Chemical Co.....	
McIntosh, John, Co.....	11
Medical Protective Co.....	11
Mead, Johnson & Co.....	4
Mellier Drug Co.....	9
Mellin's Food Co.....	6
Milwaukee Sanitarium.....	23
Mosby Co., C. V.....	36

Mueller & Co., V.....	10
Mulford, H. K., Co.....	10
Murphey Sanatorium.....	19
Norbury Sanitarium.....	21
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Parke, Davis & Co.....	18
Pasteur Institute of St. Louis.....	9
Pennoyer Sanitarium.....	6
Peoria Mud Baths.....	24
Peoria Sanatorium.....	25
Petty & Wallace's Sanitarium.....	25
Phillips Co., Chas. H.....	32
Physicians' Radium Association.....	13
Pine Sanatorium.....	34
Pitman-Moore Co.....	4
Pottenger Sanatorium.....	20
Purdue, Frederick, Co.....	8
Pure Gluten Food Co.....	5
Quaker Oats Co.....	5, 33
Radium Institute.....	36
Ransom Sanitarium.....	23
Saunders Co., W. B.....	front cover
Schoonmaker Laboratories.....	22
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Sherman, G. H., M. D.....	5
Standard Laboratories.....	27
Standard Oil Co.....	2
Storm, Katherine L., M. D.....	11
Swan-Myers Co.....	9
Tilden Co., The.....	6
Victor Electric Co.....	26
Wander, Dr. A.....	16
Waukesha Moor (Mud) Bath Co.....	24
Waukesha Springs Sanitarium.....	22
Waukesha Pure Food Co.....	6
Weirick's Sanitarium.....	25
White-Haines Optical Co.....	28

## BUYER'S INDEX

### ABDOMINAL SUPPORTERS

Storm, Katherine L., M. D.....	11
--------------------------------	----

### AUTOMOBILES, ETC.

Standard Oil Co.....	3
----------------------	---

### FOOD

Horlick's Malted Milk Co.....	2
Mead, Johnson & Co.....	6
Mellin's Food Co.....	6
Pure Gluten Food Co.....	5
Quaker Oats.....	5, 33
Wander's Ovaltine.....	16
Waukesha Pure Food Co.....	30

### HOSPITAL

Chicago Fresh Air Hospital.....	20
Chicago Maternity Hospital.....	29

### INVESTMENTS AND INSURANCE

Aetna Life Insurance Co.....	30
Medical Protective Co.....	11

### LABORATORY

Abbott Laboratories.....	7
Chicago Laboratory.....	14
Columbus Medical Laboratory.....	12
Gradwohl Biological Laboratories.....	12
Laboratory of Pathology and Bacteriology.....	2
Schoonmaker Laboratories.....	22
Standard Laboratories.....	27
Swan-Myers Co.....	16

### MEDICAL BOOK PUBLISHERS

Saunders Co., W. B.....	front cover
Mosby Co., C. V.....	36

### MEDICAL SCHOOLS

Chicago College of Medicine and Surgery.....	29
Chicago Eye, Ear, Nose and Throat College.....	29
College of Medicine, Univ. of Ill.....	

### MUD BATHS

Peoria Mud Baths.....	24
Waukesha Moor (Mud) Bath Co.....	24

### NURSES

Chicago School of Nursing.....	29
--------------------------------	----

### PHARMACEUTICALS

Abbott Laboratories.....	7
Bayer Company.....	8
Carnrick, G. W., Co.....	15
Crittenton, Chas. N., Co.....	
Fellows Medical Mfg. Co.....	19
Hanford, Dr. C. W.....	28
Kenilworth Sanitarium.....	22
Klipstein & Company.....	15
Lederle Antitoxin Laboratory.....	35
Lambert Pharmacal Company.....	13
Maltbie Chemical Co.....	
Mead, Johnson & Co.....	4
Mellier Drug Co.....	
Mulford, H. K., Co.....	10
Parke, Davis & Co.....	18
Phillips Co., Chas. H.....	32
Pitman-Moore Co.....	4
Purdue, Frederick, Co.....	8
Sherman's Bacterins.....	5
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Swan-Myers Co.....	9
Tilden Co., The.....	6

### SANATORIA & SANITARIA

Bellevue Sanitarium.....	22
Cincinnati Sanitarium.....	24
Edward Sanatorium.....	21
Fletcher's Sanatorium.....	23
Kenilworth Sanitarium.....	22
Norbury Sanitarium.....	21
Milwaukee Sanitarium.....	23
Murphey Sanatorium.....	19
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Pennoyer Sanitarium.....	6
Peoria Sanitarium.....	25
Petty & Wallace's Sanitarium.....	25
Pine Sanatorium.....	34
Pottenger Sanatorium.....	20
Radium Institute.....	36
Ransom Sanitarium.....	23
Waukesha Springs Sanitarium.....	22
Weirick's Sanitarium.....	25

### SURGICAL INSTRUMENTS

McIntosh, John, Co.....	11
Mueller & Co., V.....	
Victor Electric Co.....	26

IN PLACE OF OTHER ALKALIES USE

# Phillips' Milk of Magnesia

"THE PERFECT ANTACID"

For Correcting Hyperacid Conditions—Local or Systemic. Vehicle for  
Salicylates, Iodides, Balsams, Etc.

Of Advantage in Neutralizing the Acid of Cows' Milk for Infant and  
Invalid feeding.

## Phillips' Phospho-Muriate of Quinine

Compound

NON-ALCOHOLIC TONIC AND RECONSTRUCTIVE

With Marked Beneficial Action Upon the Nervous System. To be relied  
Upon Where a Deficiency of the Phosphates is Evident.

THE CHAS. H. PHILLIPS CHEMICAL CO.

NEW YORK

LONDON

### FOR SALE

Office Equipment for Eye, Ear, Nose and Throat  
Specialist

This equipment consists of modern office furniture and apparatus, complete sets of eye, ear, mastoid, nose and throat instruments of the newer types, all in perfect condition.

This is an exceptional opportunity for doctor starting in this specialty, or one who is changing his location.

If interested, write for further information and complete inventory of equipment to Mrs. B. S. Gailey, 340 W. State St., Jacksonville, Ill.

## CONTENTS—Continued

The Indications for Operation in Acute Mastoid Disease.	
G. Henry Mundt, M. D., Chicago.....	352
Intestinal Stasis. George B. Kelso, M. D., Bloomington, Ill.....	356

### EDITORIAL.

Conservation of Surgical Supplies.....	358
The Banquet to Doctor Billings.....	358
Clinical Congress of the American Academy of Medicine	359
The Maryland Plan.....	360

### CORRESPONDENCE.

The Chicago League for the Hard of Hearing.....	361
The Latest Development in Liability Insurance.....	362
Moratorium on Leases.....	363
Announcement .....	363
Birth Reporting .....	364
Exemption Board Recognizes Anti-Tubercular Work....	364
Guide for Milk Ordinance.....	364
U. S. Civil Service Exams.....	365

### PUBLIC HEALTH.

Illinois Statistics Improving.....	365
Poliomyelitis .....	365
Local Epidemics .....	365
County Sanatoria .....	366

### SOCIETY PROCEEDINGS.

Cook County:	
Chicago Laryngological and Otological Society....	366, 373
Chicago Ophthalmological Society.....	368
De Kalb County .....	374
Fulton County .....	374
La Salle County .....	375
Madison County .....	375
Montgomery County .....	375
Pike County .....	375
Personals .....	376
News Notes .....	378
Marriages .....	379
Deaths .....	380
Book Notices .....	380



Pike County	
J. R. Pollock, Pres.....	Nebo
W. E. Shastid, Secy.-Treas.....	Pittsfield
Pope County	
J. A. Fisher, Pres.....	Brownsfield
L. S. Barger, Secy.....	Golconda
Pulaski County	
L. F. Robinson, Pres.....	Ullin
W. R. Wesenberg, Secy.....	Mound City
Randolph County	
A. E. Fritze, Pres.....	Chester
John P. Grimes, Secy.-Treas.....	Menard
Richland County	
A. T. Telford, Pres.....	Olney
E. H. Horner, Secy.....	Olney
Rock Island County	
H. A. Beam.....	Moline
H. J. Love, Secy.....	East Moline
St. Clair County	
J. H. Fulgham, Pres.....	East St. Louis
A. E. Hansing, Secy.....	Belleville
Saline County	
M. D. Empson, Pres.....	Galatia
W. J. Blackard, Secy.....	Harrisburg
Sangamon County	
Elmer E. Hagler, Pres.....	Springfield
Henry A. Aschauer, Secy.....	Springfield
Schuyler County	
A. W. Ball, Pres.....	Rushville
J. S. Steiner, Secy.....	Rushville
Scott County	
J. W. Eckman, Pres.....	Winchester
H. H. Fletcher, Secy.....	Winchester
Shelby County	
F. A. Martin, Pres.....	Tower Hill
Frank P. Auld, Secy.....	Shelbyville
Stark County	
James R. Holgate, Pres.....	Wyoming
Clyde Berfield, Secy.....	Toulon
Stephenson County	
N. C. Phillips, Pres.....	Freeport
D. G. Smith, Secy.....	Freeport
Tazewell County	
H. L. Yoder.....	Morton
F. C. Gale, Secy.....	Pekin
Union County	
S. G. Martin, Pres.....	Anna
E. V. Hale, Secy.....	Anna
Vermilion County	
J. B. Morton, Pres.....	Ridge Farm
Solomon Jones, Secy.....	Danville
Wabash County	
P. G. Manley, Pres.....	Mt. Carmel
A. A. Aukenbrandt, Secy.....	Mt. Carmel
Warren County	
Philo B. Conant, Pres.....	Roseville
H. M. Camp, Secy.....	Monmouth
Washington County	
R. Jack, Pres.....	Okawville
H. Schmidt, Secy.....	Addieville
Wayne County	
T. J. Hilliard, Pres.....	Fairfield
Osstella F. Blakely, Secy.....	Fairfield
White County	
C. B. Staley, Pres.....	Enfield
John Niess, Secy.....	Carmi
Whiteside County	
W. H. Durkee, Pres.....	Fulton
H. N. Schmaling, Secy.....	Fulton
Will County	
Marion K. Bowles, Pres.....	Joliet
L. J. Lennon, Secy.....	Joliet
Williamson County	
J. G. Parmley, Pres.....	Marion
H. A. Felts, Secy.....	Marion
Winnebago County	
Wm. E. Park, Pres.....	Rockford
C. M. Ranseen, Secy.-Treas.....	Rockford
Woodford County	
W. D. Madison, Pres.....	Roanoke
H. A. Millard, Secy.....	Minonk

# Quaker Oats

*Extra-Grade Oat Flakes*

## Five Cents Per 1000 Calories

The same food value in eggs costs 44.7 cents. In round steak, 45.6 cents. In milk, 18.5 cents. In white bread, 8.5 cents.

Every dollar spent for Quaker Oats saves \$3 or \$4 as compared with the average mixed diet.

Yet Quaker Oats is queen oats flaked. We use just the big plump grains. A bushel of choice oats yields but ten pounds of Quaker.

The result is a flavor which has won the world.

Quaker oats is the leading brand wherever oat lovers live. It fosters the love of oats.



### The Quaker Oats Company

Chicago

(1588)

# Hydroleine

**An ethical emulsion of  
cod-liver oil without  
medicinal admixture.**

The manner in which the purest and freshest cod-liver oil is emulsified in Hydroleine, makes it easily digestible. Furthermore, Hydroleine does not offend the taste. Its nutty and distinctive flavor is liked by the most delicate palate, and children take it willingly.

In practice it is markedly utilizable, and is reliably stable. It is effective as a food-fat and possesses superior characteristics.

**In Long-continued Professional  
Use Hydroleine Has Proved  
Its Dependability**

**THE CHARLES N. CRITTENTON CO.**  
115 Fulton Street, New York

**Sold by druggists**

Sample sent to physicians on request.

## WANTED, FOR SALE, AND RENT DEPARTMENT

Advertisements under this heading cost one dollar for four lines or less, and 25 cents for each additional line, each insertion. Payable in advance. Line holds eight ordinary words.

**DRUG AND LIQUOR HABITS CURED.** No suffering or danger. New treatment without delirium. Absolutely satisfactory results. Modern Sanitarium, established eighteen years. Close personal attention. **RALPH SANITARIUM**, 529 Highland Ave., Kansas City, Mo.

**FOR SALE**—At one-half present prices, complete line of surgical instruments, embracing gynecological, urethral, nose and throat and general operating. All up-to-date and in good condition. Also microtome and excellent microscope. Address all inquiries to Mrs. Stephen C. Glidden, 422 N. Vermilion St., Danville, Ill.

## College of Medicine

### University of Illinois



Minimum admission requirements for entrance, fifteen units of work from an accredited High School and in addition two years in a recognized university or college, involving at least one year in college physics, biology, chemistry and six college hours in French or German.

For course of medical study, four years are required. Eligible students will receive the

degree of B. S. at the completion of the sophomore year. A greater measure of patriotic service can be given by physicians than in any other activity.

Collegiate year begins October 1st, 1917.

For information concerning course of study, fees, etc., address Secretary.

**College of Medicine of the University of Illinois**  
Box 51 Congress and Honore Streets, Chicago, Illinois



*Resident Physician*

**JAMES H. APPLEMAN, M. D.**

Modern institutional treatment administered under home-like conditions. Ethically conducted. Treatment based on latest scientific physical and laboratory findings. A fixed charge based on a complete examination is made to cover entire course of treatment, including examinations, nursing and medical attendance. Privacy assured. Descriptive and illustrated booklet covering both subjects sent free on request.

**The Pine Sanitarium**

*Established 1900*

**1919 Prairie Ave., Chicago, Ill.**

Local and Long Distance Telephone  
Calumet 4543



# Lobar Pneumonia

## Successfully Treated with Type I Antipneumococcus Serum

(One-third of All Cases of Lobar Pneumonia are Type I Infection)

### Without Serum Treatment

**10%**

of *all* cases die of Type I infection

### With Serum Treatment

**2%**

of *all* cases die of Type I infection

THE work of Neufeld, Lister, Cole and others has shown that the pneumococci causing lobar pneumonia can be classified into several distinct groups: that 80 per cent of the cases are due to infection with Types I, II and III; and that  $\frac{1}{3}$  of the pneumonia cases are caused by Type I pneumococcus. It has been shown, experimentally and clinically, that immune serum against Type I infection is highly efficient; also that immune serums for the other Type infections do not produce such effective therapeutic results.

Major Nichols, in discussing the lobar pneumonia problem in the U. S. Army, says: "The death rate in Type I cases has been reduced from over 30 per cent to 5 per cent. This method of treatment has passed the experimental stage, and no patient with Type I infection who dies without the early intravenous administration of large doses of Type I serum can be said to have received the best treatment."

*Lederle's* ANTIPNEUMOCOCCUS SERUM—TYPE I is standardized by animal protection tests, according to the method outlined by Cole. It is marketed in special syringe packages containing 50 cc., thus facilitating the intravenous administration of the recommended doses of 100 to 200 cc. Every package bears the date of manufacture, thus insuring the physician against the use of serum of unknown age.

PRICE \$5.00 PER PACKAGE OF 50 CC.

*Literature on request.*

*For preventive inoculation, Pneumococcus Vaccine containing the principal types of pneumococci has been suggested by Major Nichols for use in the U. S. Army.*

**Lederle Antitoxin Laboratories**

**Schieffelin & Co., Distributors**

**New York**

# THE RADIUM INSTITUTE

1604 Mallers Bldg., 59 East Madison Street

Corner Wabash Avenue, Telephone Randolph 5794

## CHICAGO

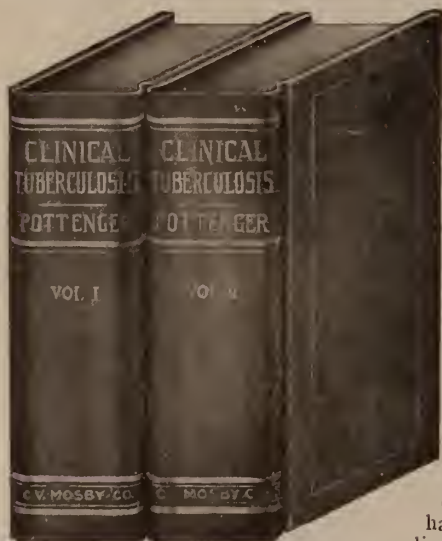
DR. FRANK E. SIMPSON, *Director*

**T**REATMENT of Malignant and Benign Growths with Radium, Post-Operative Prophylactic Radiations. Applicators for all purposes, including many of Special design. We desire to confer and cooperate with surgeons who wish to use Radium in inoperable cases.

A complimentary copy of *The Radium Quarterly* will be sent on request.

### COUNCIL

DR. F. A. BESLEY	DR. E. C. DUDLEY
DR. A. R. EDWARDS	DR. O. T. FREER
DR. M. HERZOG	DR. L. E. SCHMIDT
DR. G. F. SUKER	



## CLINICAL TUBERCULOSIS

PATHOLOGICAL ANATOMY, PATHOLOGICAL PHYSIOLOGY, DIAGNOSIS, PROGNOSIS, COMPLICATIONS AND TREATMENT

By FRANCIS M. POTTENGER, A. M., M. D., LL. D.

Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Professor of Diseases of the Chest, College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, California.

In two volumes of 1,400 pages, with original engravings, including photographs, line drawings, charts, color plates, etc. Sold only in sets. Price, per volume, \$6.00.

### A Monumental Work on Tuberculosis

This is not only a book for specialists on tuberculosis, but is a practical treatise on diagnosis of the chest and in fact a study of the human being who happens to have tuberculosis. It contains a broad discussion of the principles of internal medicine.

The first few chapters dealing with infections, their relation to childhood and childhood tuberculosis, particularly when one takes into consideration that all the methods of treatment are discussed from their physiological action, telling the physician what each will do and will not do, should make it worth while to all pediatricians.

The chapter on laboratory methods is an advance on all things written and should make it necessary that this be in the hands of all people who are trying to do accurate diagnostic work in tuberculosis. It is not a book alone for specialists in tuberculosis, but should be in the hands of general men because of its being on general medicine. *Sign the attached coupon and mail today.*

**C. V. MOSBY CO.—Medical Publishers—ST. LOUIS**

Send for Complete Catalog of Medical Publications

III.  
Med. Jour.

C. V. MOSBY  
COMPANY  
St. Louis.

Gentlemen: Please send me one set (2 vols.) Pottenger's "Clinical Tuberculosis," for which I enclose my check for \$12.00, or you may charge to my account.

Name .....

Street .....

Town..... State.....



# Illinois Medical Journal

OFFICE OF PUBLICATION 3338 OGDEN AVENUE, CHICAGO

Vol. XXXII, No. 6

CHICAGO, DECEMBER, 1917

\$2.00 a Year

## CONTENTS

ORIGINAL ARTICLES		PAGE		PAGE
Conservation of Maternal Nursing. <i>George Edwin Baxter, M. D., Chicago</i> .....		381	The Interrelation of the Diseases of the Eye, the Nose and Nasal Accessory Sinuses, with Report of Cases. <i>E. C. Spitze, M. D., East St. Louis</i> .....	399
Electrical Treatment of Infantile Paralysis. <i>Emil H. Grubbe, M. D., Chicago</i> .....		384	The Management of Squint. <i>Robert Von der Heydt, M. D., Chicago</i> .....	404
Remarks on the Treatment of Caverosus and Plexiform Angioma. <i>Francis Reder, M. D., St. Louis, Mo.</i> .....		387	Some Medical and Surgical Problems of Prophylaxis in Eclampsia. <i>W. H. Condit, M. D., Minneapolis, Minn.</i> .....	406
Review of the Recent Work on the Etiology of Pneumonia. <i>Willard W. Dicker, M. D., Chicago</i> .....		393	The Treatment of Hemorrhoids Under Local Anesthesia. <i>Charles J. Drueck, M. D., Chicago</i> .....	411
The Removal of Steel Particles from the Interior of the Eye by the Magnet. <i>Frank Allport, M. D., Chicago</i> ..		395	Liquid Petrolatum as an Antiseptic. <i>H. L. Jenkin, M. D., Millford, Ill.</i> .....	416
			The Course of the Tuberculous Disease at Different Ages. <i>John Ritter, M. D., Chicago</i> .....	416

(Continued on page 32)

Entered as Second-Class Matter August 28, 1913, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879.

## Books by Chicago Men

**Abt**—The Baby's Food. \$1.25 net.  
**American Illustrated Medical Dictionary.**  
 New (9th) Edition. \$5.00 net.  
**Arey**—Laboratory Histology. \$1.00 net.  
**Bohm, Davidoff and Huber**—Histology.  
 Second Edition. \$3.60 net.  
**Church and Peterson**—Nervous and Mental Diseases. Eighth Edition. \$5.00 net.  
**De Lee**—Obstetrics. New (2nd) Edition.  
 \$8.00 net.  
**Fenger**—Memorial Volumes. Per set, \$15.00 net.  
**Grulee**—Infant Feeding. New (3rd) Edition.  
 \$3.25 net.  
**Herrick**—Introduction to Neurology. \$1.75 net.  
**Herrick and Crosby**—Laboratory Neurology.  
*Ready Soon.*

**Hill**—Histology and Organography. New (4th) Edition. \$2.50 net.  
**Hill and Gerstley**—Infant Feeding. \$2.75 net.  
**Hornsby and Schmidt**—The Modern Hospital. \$7.00 net.  
**Jordan**—General Bacteriology. New (5th) Edition. \$3.25 net.  
**Prentiss and Arey**—Embryology. New (2nd) Edition. \$4.00 net.  
**Smithies and Ochsner**—Cancer of the Stomach. \$5.75 net.  
**Strouse and Perry**—Food for the Sick. \$1.50 net.  
**Surgical Clinics of Chicago.** Per Clinic Year: \$14.00 net.  
**Webster**—Diseases of Women. \$7.00 net.  
 —Obstetrics. \$5.00 net.  
**Wells**—Chemical Pathology. Second Edition. \$3.25 net.

A VERY MERRY CHRISTMAS

W. B. SAUNDERS COMPANY

Philadelphia and London

This Issue, 6,700 Copies





# Stanolind

Trade Mark Reg. U. S. Pat. Off.

## Liquid Paraffin

(Medium Heavy)

Tasteless — Odorless — Colorless

### In Treating Hemorrhoids

**S**TANOLIND Liquid Paraffin, used regularly, very generally relieves hemorrhoids and fissure, even when of some years' standing.

Since these morbid conditions are usually the result of constipation, and are aggravated by straining, Stanolind Liquid Paraffin aids by rendering the intestinal contents less adhesive, by allaying irritation and thus by permitting the diseased tissues to become healed.

Where a contraindication for operative treatment exists, the use of Stanolind Liquid Paraffin in these conditions will frequently give relief from distressing symptoms and may even permit the parts to be restored to a condition where operative procedure may be postponed.

The *special advantage* of Stanolind Liquid Paraffin lies in the fact that its beneficial effects are not diminished by continual use, as is the case with almost any other laxative.

Stanolind Liquid Paraffin acts by lubrication and by adding bulk to the indigestible intestinal residue.

*A trial quantity with informative booklet will be sent on request.*

**Standard Oil Company**

(Indiana)

72 West Adams Street  
Chicago, U. S. A.

75



## *An Efficient Sugar for Infant Feeding*

means maximum tolerance, assimilability, and gain in weight with minimum digestive disturbances and diarrhoea for the infant. This is why nearly every pediatricist prescribes

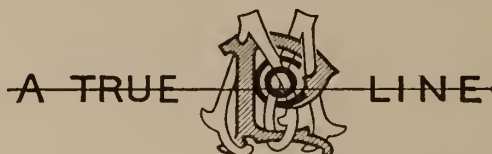
# MEAD'S DEXTRI-MALTOSE

(MALT SUGAR)

**in feeding formulae for infants' diet**

Let us send you samples and literature fully describing the simplicity of using Mead's Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

**MEAD JOHNSON & CO., EVANSVILLE, IND.**



In the present uncertain state of the drug market, with the demand for many items far exceeding the supply, the market is being flooded with crude drugs and chemicals of inferior quality, many of which are being offered at very low prices.

For the protection of American Physicians, crudes and chemicals entering into the manufacture of P-M Co. pharmaceuticals are secured from reliable sources *only* and are subjected to the closest scrutiny by our chemists. Constant analyses and assays protect you, Doctor, against untrustworthy ingredients when you use the pharmaceuticals of



**PITMAN-MOORE COMPANY**  
Pharmaceutical and Biological Chemists  
Indianapolis



# HOYT'S GLUTEN BREAKFAST FOOD

Eaten by those who are desirous of adding protein to their diet with minimum starch.

Send for description of our two breakfast foods and our other genuine gluten products and name of our nearest agent.

**THE PURE GLUTEN FOOD CO.**  
90 West Broadway NEW YORK CITY

# Hay Fever

Successfully Treated with

## BACTERIAL VACCINES

Pollen irritation and breathing of the hot dust laden atmosphere favor the development of pyogenic bacteria in the respiratory tract which then becomes a primary factor of the disease.

Experience shows that the immunizing influence of an appropriate bacterin will either cure the disease or so modify it that it causes but little distress. Use Sherman's No. 40.

Write for Literature.



**G.H. SHERMAN, M.D.**  
Detroit, Mich.  
U.S.A.



## Not All Bran But Effective

Our doctor friends, some years ago, asked us to make a bran dainty.

They wanted a food which was staple and likable—a food to be continued.

They wanted the bran in flake form, to have maximum efficiency.

We made Pettijohn's for them—25 per cent bran flakes, hidden in soft rolled wheat. Now people are serving—largely by doctors' advice—nearly a million dishes weekly.

You will prefer Pettijohn's, we think, to any clear bran food when you know it. And so will those to whom you recommend it.

# Pettijohn's

*Rolled Wheat with Bran Flakes*

Soft, flavory wheat rolled into luscious flakes, hiding 25 per cent of unground bran. A famous breakfast dainty.

Pettijohn's Flour is 75 per cent fine patent flour mixed with 25 per cent tender bran flakes. To be used like Graham flour in any recipe; but better, because the bran is unground.

**The Quaker Oats Company**

Chicago

(1753)

# FIRWEIN—Expectorant—Sedative—Antispasmodic

The Better Prescription in the Different Forms of Bronchial Inflammations.

*Free Samples to the Profession*

New Lebanon, N.Y. THE TILDEN COMPANY

Manufacturing Pharmacists  
and Chemists since 1848

St. Louis, Mo.



**DOCTOR:** It is our purpose to give to you on your orders, the best pharmaceuticals that the highest grade of crude drugs, pure chemicals and skilled workmanship, under experienced supervision, can produce.

When our man calls upon you, give him a few moments of your time. He will tell you more about what we are trying to do.

G. D. SEARLE & CO. Mfrs. of Fine Pharmaceuticals and Hypodermic Tablets  
215-217-219 W. Ohio St. CHICAGO Telephone North 1704

## Special INFANT FEEDING Malnutrition-Marasmus-Atrophy

MELLIN'S FOOD	} Analysis :	Fat	.49
4 level tablespoonfuls		Protein	2.28
SKIMMED MILK		Carbohydrates	6.59
8 fluidounces		Salts	.58
WATER		Water	90.06
8 fluidounces			100.00

The principal carbohydrate in Mellin's Food is maltose, which seems to be particularly well adapted in the feeding of poorly nourished infants. Marked benefit may be expected by beginning with the above formula and gradually increasing the Mellin's Food until a gain in weight is observed. Relatively large amounts of Mellin's Food may be given, as maltose is immediately available nutrition. The limit of assimilation for maltose is much higher than other sugars, and the reason for increasing this energy-giving carbohydrate is the minimum amount of fat in the diet made necessary from the well-known inability of marasmic infants to digest enough fat to satisfy their nutritive needs.

MELLIN'S FOOD COMPANY,

BOSTON, MASS.



# Dichloramine-T

## DAKIN'S OIL SOLUBLE ANTISEPTIC

USABLE IN CONCENTRATIONS TWENTY TO EIGHTY TIMES AS STRONG AS HYPOCHLORITE SOLUTION.

During the Clinical Congress of Surgeons, held in Chicago, October 22 to 27, the use of DICHLORAMINE-T was reported in 7,228 surgical cases, with very remarkable results.

Twelve hundred cases of war wounds treated in France with DICHLORAMINE-T were also reported, with 99.5% recoveries and no secondary hemorrhages.

DICHLORAMINE-T is used as an oil spray for nasal and throat work to destroy the microorganisms of diphtheria, meningitis, and other diseases. It is also used as a spray for surface wounds and burns, and is poured into deep wounds, thus doing away with intermittent or continuous irrigation and frequent changes in expensive dressings.

### TRIAL OUTFIT

1 ounce DICHLORAMINE-T 4 ounces Chlorinated Eucalyptol  
All Glass Atomizer 16 ounces Chlorinated Paraffin Oil

Sample Vial of Chlorazene Tablets.

Price of Complete Outfit with full directions and Literature, \$5.35, direct from Our Laboratories or through your druggist.

In Canada, Customs Tariff must be added to price quoted.

## THE ABBOTT LABORATORIES

CHICAGO — NEW YORK

SEATTLE

SAN FRANCISCO

LOS ANGELES

TORONTO

BOMBAY

# ILLINOIS STATE MEDICAL SOCIETY

## SECTION OFFICERS. AND COMMITTEES

**SECTION ON SURGERY**  
John S. Nagel, Chairman.....Chicago  
H. A. Millard, Secretary.....Minonk  
**SECTION ON MEDICINE**  
C. Martin Wood, Chairman.....Decatur  
S. R. Slaymaker, Secretary.....Chicago  
**SECRETARIES' CONFERENCE**  
Flint Bondurant, President.....Cairo

F. C. Gale, Secretary.....Pekin  
**SECTION ON PUBLIC HEALTH AND HYGIENE**  
Grace Campbell, Chairman.....Chicago  
W. E. Park, Secretary.....Rockford  
**SECTION ON EYE, EAR, NOSE AND THROAT**  
J. Sheldon Clark, Chairman.....Freeport  
Wesley H. Peck, Secretary.....Chicago

## COUNTY SOCIETIES

This list is corrected in accordance with the best information obtainable at the date of going to press. County Secretaries are requested to notify The Journal of any changes or errors.

**Adams County**  
J. L. Aleshire, Pres.....Plainville  
Elizabeth B. Ball, Secy.....Quincy  
**Alexander County**  
J. W. Dunn, Pres.....Cairo  
R. E. Barrows, Secy-Treas.....Cairo  
**Bond County**  
W. T. Easley, Pres.....Greenville  
J. C. Wilson, Secy.....Greenville  
**Boone County**  
Geo. Markley, Pres.....Poplar Grove  
H. E. Delavergne, Secy.....Belvidere  
**Brown County**  
D. R. Peters, Pres.....Mt. Sterling  
E. C. Allworth, Secy-Treas.....Mt. Sterling  
**Bureau County**  
C. C. Barrett, Pres.....Princeton  
M. A. Nix, Secy.....Princeton  
**Calhoun County**  
W. A. Skeel, Pres.....Kampsville  
J. H. Peisker, Secy.....Hardin  
**Carroll County**  
G. E. Merchon, Pres.....Mt. Carroll  
R. B. Rice, Secy-Treas.....Mt. Carroll

**Cass County**  
C. E. Soule, Pres.....Beardstown  
W. R. Blackburn, Secy.....Virginia  
**Champaign County**  
O. O. Stanley, Pres.....Urbana  
J. C. Dallenbach, Secy.....Champaign  
**Christian County**  
R. C. Danford, Pres.....Pana  
S. B. Herdman, Secy.....Taylorville  
**Clark County**  
H. C. Houser, Pres.....Westfield  
L. J. Weir, Secy.....Marshall  
**Clay County**  
C. E. Duncan, Pres.....Flora  
R. D. Finch, Secy.....Flora  
**Clinton County**  
Orvil O'Neal, Pres.....Shattuc  
J. Q. Roane, Secy.....Carlyle  
**Coles-Cumberland County**  
Wm. Smith, Pres.....Toledo  
R. H. Craig, Secy-Treas.....Charleston  
(Continued on page 11)

## WHEN A TONIC IS NEEDED

the best obtainable is called for—in its composition, in its quality and character, and above all, in its capacity to promote bodily vitality and strength. In

# Gray's Glycerine Tonic Comp.

FORMULA DR. JOHN P. GRAY

the practitioner has at his command a restorative and reconstructive that justifies every confidence. Of the highest quality and constant uniformity—in spite of the drug market—and exceptional therapeutic efficiency, the use of "Grays" is a guarantee that the best possible results will be obtained in each and every case.

For over a quarter of a century "Grays" has been one of the most widely—and successfully—used remedies in atonic and debilitated conditions.

### COMPOSITION

Glycerine  
Sherry Wine  
Gentian  
Taraxacum  
Phosphoric Acid  
Carminatives

"Grays" is now  
supplied in two sizes—  
a 6 oz. prescription  
size, and the  
original 16 oz. package.

### INDICATIONS

Auto-Intoxication  
Atonic Indigestion  
Anemia  
Catarrhal Conditions  
Malnutrition  
Nervous Ailments  
General Debility

THE PURDUE FREDERICK CO., 135 Christopher St., New York

In the Treatment of

# Cystitis—Urethritis Pyelitis—Prostatitis—Bacilluria

## HELMITOL

ACTS AS

## *An Efficient Urinary Antiseptic*

Agreeable of Administration—Generally Well-Tolerated  
by the Gastro-Intestinal and Urinary Tract.

**Conveniently taken in Tablets, which readily dissolve.**

Supplied in 5 gr. tablets, bottles of 25 and 100, and in powder in ounces.

Samples and Literature supplied by

THE BAYER COMPANY, Inc.  
117 Hudson St., New York, N. Y.



# Chicago Pasteur Institute

26th YEAR

812 NORTH DEARBORN STREET

CHICAGO

FOR THE PREVENTIVE TREATMENT OF HYDROPHOBIA

ANTONIO LAGORIO, M.D. LL.D., Medical Director

G. E. BRUNO, M.D., Associate Director

FRANK A. LAGORIO, M.D., Associate Director

**Announcement**—When patients are unable to come to  
Institute, we can furnish physicians  
our course of Pasteur treatment by mail, in the State of Illinois.  
Telephone Superior 973.

*N. B.—We have no branches and the use of our name is unauthorized.*

## PASTEUR INSTITUTE of ST. LOUIS

We are prepared to furnish the Pasteur Treatment for the prevention of rabies to any physician in the United States, by *Special Delivery Mail*. We are licensed by the Treasury Department to engage in Interstate Commerce with this product.

We furnish Eighteen Treatments, by Special Delivery Mail, with one 5c glass syringe and needles, full directions and the service of our consulting department, for \$50.00 complete.

We have many Illinois physicians among our satisfied patrons. *Wire or telephone when help is needed*

### PASTEUR INSTITUTE of ST. LOUIS

R. B. H. GRADWOHL, M.D., Director

928 N. Grand Ave., St. Louis, Mo.

# Poor Laboratory Diagnosis

## IS WORSE THAN NONE

*It Breeds Confusion*

Reliable Laboratory work requires more than ability. It demands an unusually large and expensive equipment. It demands sufficient patronage to assure an ever present source of unusual culture media and biological reagents.

## THE CLINICAL LABORATORY of SWAN-MYERS COMPANY

Provides the highest type of pathological work because of its unlimited laboratory facilities and its staff of full and part time specialists who are experts in Pathology, Serology, Bacteriology, Physiological Chemistry and Pharmacology.

Autogenous Vaccines are made under the same careful system and safeguards which enable us to maintain our Government License.

You can depend upon Swan-Myers' Work. Prices are as low as is consistent with the most careful technic.

Wassermann Reaction...\$5.00

Tissue Diagnosis.....\$5.00

Autogenous Vaccine....\$5.00

**SWAN-MYERS COMPANY,** *PHARMACEUTICAL and  
BIOLOGICAL LABORATORIES*  
Indianapolis, Indiana, U. S. A.



# Mulford Antipneumococcic Serums

## For the Specific Treatment of Lobar Pneumonia

Lobar pneumonia is caused chiefly by the pneumococcus, of which there are three different fixed types and a fourth group, including possibly twelve different types.

Types I and II are responsible for about 70 per cent of cases, with an average mortality, without serum treatment, of from 25 to 30 per cent. With serum treatment the mortality of Type I has been reduced to from 5 to 8 per cent.

Type III is responsible for from 10 to 15 per cent of cases, with a death rate of 50 per cent.

Group IV is responsible for from 15 to 20 per cent of cases. These usually follow a milder course, only 10 to 15 per cent resulting fatally.

Mulford Antipneumococcic Serum Polyvalent is highly protective against pneumonia caused by Type I, and contains antibodies against Types II and III.

The serum is tested and standardized by tests on mice; 1 c.c. must protect against 500,000 fatal doses of Type I cultures.

The polyvalent serum should be used immediately on diagnosis of lobar pneumonia where type determination is impossible.

The dose is from 50 to 100 mls (c.c.) intravenously, repeated about every six to eight hours until the patient successfully passes the crisis. Most cases will require 300 mls (c.c.) or more. It is safe to administer the serum intravenously in large and repeated doses. When the serum is injected intramuscularly, the results are slower and less effective.

Mulford Antipneumococcic Serums are furnished in packages containing syringes of 20 mls (c.c.) each, and in ampuls of 50 mls (c.c.) for intravenous injection.

Mulford Specific Agglutinating Pneumococcic Serums for laboratory diagnosis are furnished for each of the three types, in 10-ml (c.c.) ampuls sufficient for about 20 tests.

Mulford Pneumo-Serobacterin Mixed is an efficient prophylactic against lobar pneumonia. It is supplied in packages of four graduated syringes, A, B, C, D strength, and in syringes of D strength separately.

Syringe A 250 million killed sensitized bacteria  
Syringe B 500 million killed sensitized bacteria  
Syringe C 1000 million killed sensitized bacteria  
Syringe D 2000 million killed sensitized bacteria

## H. K. MULFORD CO., Philadelphia, U. S. A.

Manufacturing and Biological Chemists

30532

Literature sent on request with  
full laboratory tests



Cook County  
 Chas. E. Humlston, Pres.....Chicago  
 J. V. Fowler, Secy.....Chicago  
 Crawford County  
 A. G. Brooks, Pres.....Stoy  
 C. E. Price, Secy.....Robinson  
 DeKalb County  
 Clifford E. Smith, Pres.....De Kalb  
 L. E. Barton, Secy.....Malta  
 De Witt County  
 J. M. Wilcox, Pres.....Clinton  
 S. L. Thorpe, Secy-Treas.....Clinton  
 Douglas County  
 Floyd C. Phillips, Pres.....Arthur  
 Walter C. Blaine, Secy.....Tuscola  
 Du Page County  
 (Affiliated with Cook County)  
 Edgar County  
 Wm. A. Buchanan, Pres.....Paris  
 George H. Hunt, Secy.....Paris  
 Edwards County  
 W. E. Buxton, Pres.....West Salem  
 R. L. Moter, Secy.....Albion  
 Effingham County  
 Frank W. Goodell, Pres.....Effingham  
 F. Buckmaster, Secy.....Effingham  
 Fayette County  
 L. L. Morey, Pres.....Vandalia  
 Mark Greer, Secy.....Vandalia  
 Franklin County  
 Wm. H. Smith, Pres.....Benton  
 Edgar Austin, Secy.....Benton  
 Fulton County  
 W. L. Crouch, Pres.....Fairview  
 D. S. Ray, Secy.....Cuba  
 Gallatin County  
 J. W. Bowling, Pres.....Shawneetown  
 A. B. Capel, Secy.....Shawneetown  
 Greene County  
 O. L. Edwards, Pres.....Roodhouse  
 L. O. Frech, Secy-Treas.....White Hall  
 Grundy County  
 Roscoe Whitman, Pres.....Morris  
 F. C. Bowker, Secy.....Morris  
 (Continued on page 29)

## The STORM Binder and Abdominal Supporter

PATENTED



### SACRO-ILIAC BELT

No Whalebones. No Rubber Elastic.  
 Washable as Underwear

High and Low Operations, Hernia,  
 Relaxed Sacro-iliac Articulations,  
 Floating Kidney, Obesity, Preg-  
 nancy, Ptosis, Pertussis, etc.

Send for illustrated folder and Testimonials of Physicians.  
 Mail Orders filled within Twenty-four Hours.

KATHERINE L. STORM, M. D.  
 1541 Diamond St., PHILADELPHIA, PA.

## 50% Better Prevention Defense Indemnity

1. All claims or suits for alleged civil malpractice, error or mistake, for which our contract holder,
2. Or his estate is sued, whether the act or omission was his own
3. Or that of any other person (not necessarily an assistant or agent),
4. All such claims arising in suits involving the collection of professional fees,
5. All claims arising in autopsies, inquests and in the prescribing and handling of drugs and medicines.
6. Defense through the court of last resort and until all legal remedies are exhausted.
7. Without limit as to amount expended.
8. You have a voice in the selection of local counsel.
9. If we lose, we pay to amount specified, in addition to the unlimited defense.
10. The only contract containing all the above features and which is protection per se.

A Sample Upon Request

The  
**MEDICAL PROTECTIVE COMPANY**  
 of Ft. Wayne, Indiana.

Professional  
 Protection, Exclusively

## A COMPLETE DIAGNOSTIC LABORATORY

WE MAKE EVERY LABORATORY TEST OF MERIT:

{ WASSERMANN, controlled by the  
{ HECHT-GRADWOHL, the best test for syphilis.

GONORRHEAL BLOOD TEST.

TUBERCULOSIS BLOOD TEST.

All other examinations, Urine, Feces, Stomach Contents, Sputum, Blood Films, Blood Cultures, Vaccines, Blood Chemical Test for Sugar, Urea, Uric Acid and Creatinine.

Write for Free CONTAINERS, SLIDES, CULTURE TUBES AND LITERATURE

GRADWOHL BIOLOGICAL LABORATORIES, 928 N. Grand Avenue, St. Louis, Mo.  
R. B. H. GRADWOHL, M. D., Director



### Quality Efficiency Uniformity

RHEUMATISM NEURALGIA SCIATICA TONSILLITIS LUMBAGO  
HEAVY COLDS GRIPPE GOUT EXCESS OF URIC ACID

**Tongaline Liquid**  
Four-ounce Bottle    Eight-ounce Bottle    Five-pint Bottle

**Tongaline Tablets    Tongaline and Lithia Tablets**  
**Tongaline and Quinine Tablets**

Box, Fifty Tablets    Box, One Hundred Tablets

Samples on Application    MELLIER DRUG COMPANY, Saint Louis

## Send Your Specimens for Diagnosis

TO THE

# Columbus Medical Laboratory

ESTABLISHED 1893

31 N. State Street - - Chicago, Illinois

WASSERMANN and other serum tests.

AUTOGENOUS VACCINES prepared.

TISSUE from surgical cases for diagnosis.

Urine, Sputum and Blood tests.

Post Mortem and Medico Legal Advice.

Water, Food and Drug Analyses.

*Dr. Adolph Gerhrmann, Pres.*

Central 2740

Nights, Oakland 6938



## LISTERINE

A trustworthy, unirritating solution composed of volatile and non-volatile antiseptics; extensively and satisfactorily employed in dilution up to 25% as a wet dressing for surgical and accidental wounds.

## LISTERINE

Suitably diluted, applied by injection, douche or spray, often serves a useful purpose in catarrhs and conditions involving hyper-secretion from mucous surfaces. It is an efficient deodorizer.

## LISTERINE

On account of its boric and benzoic acid constituents, forms a suitable lotion in dermatitis following vaccination. In various cutaneous disorders, its use allays excessive itching or irritation, and promotes cleanliness while exercising its antiseptic effect.

Descriptive literature on request

# Lambert Pharmacal Company

Twenty-first and Locust Streets

St. Louis, Mo., U. S. A.

## RADIUM FOR RENT

BY

### THE PHYSICIANS' RADIUM ASSOCIATION of CHICAGO

(Incorporated under the laws of Illinois: "Not for profit")

Any case, in which radium therapy is indicated, is provided for in our large assortment of radium applicators. Loaned on application from any responsible physician, case having first been passed on by us after receipt of adequate information. Certain cases may be sent to our office for treatment. Moderate rental fees charged. For further particulars address

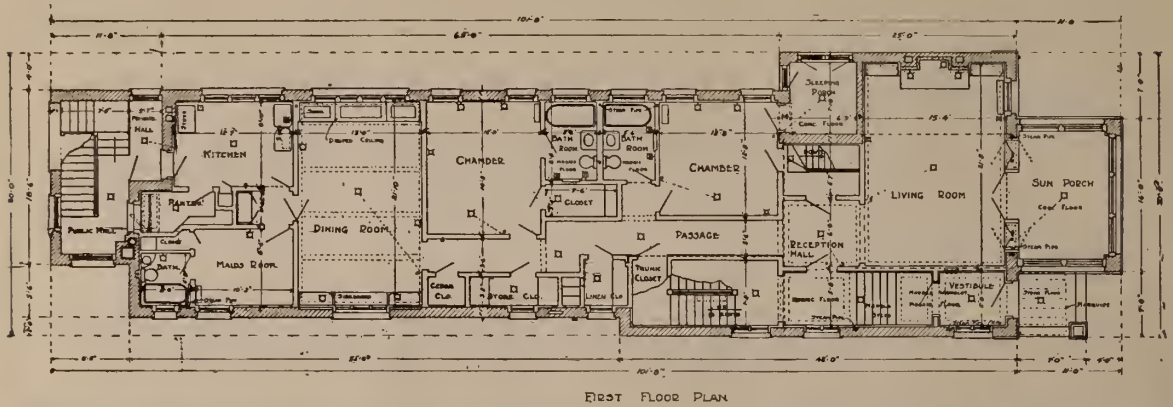
#### THE PHYSICIANS' RADIUM ASSOCIATION

1104 Tower Bldg., 6 N. Michigan Ave.,

Telephones: Randolph 6897-6898

CHICAGO

Board of Directors: WILLIAM L. BAUM, M.D.; THOMAS J. WATKINS, M.D.; FREDERICK MENGE, M.D.; WALTER S. BARNES, M.D.; ALBERT WOELFEL, M.D. Managing Director: ALBERT WOELFEL, M.D.



## FOR RENT

### On the North Shore

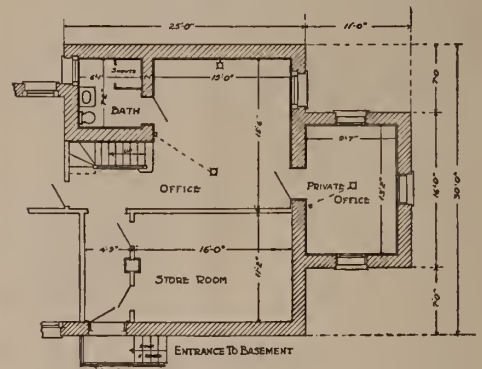
*Splendid location for a Doctor. In the fastest growing section in Chicago.*

### 6708 Sheridan Road

#### First Floor and Basement

In the heart of the LOYOLA District, 2 blocks north of the LOYOLA STATION of the Northwestern "L".

Express service to the Loop.



BASEMENT PLAN.



## Description

Three apartment building with large Doctor's office in basement, with outside entrance, and an inside stairway leading to 1st floor. Each apartment has six large rooms, including two tile baths with showers attached and a maid's bath.

## OR WILL SELL

## Investment

Size of lot 35' x 150'. Annual rental \$3,240.00. Price \$28,000.00  
Size of building, 30' x 119'8". Encumbrance \$13,000.00 at 5½%. Due 1922.

For further particulars address

**E. F. LINDROOTH** Telephone Majestic 7096 **1425 Marquette Bldg., Chicago**

Mention ILLINOIS MEDICAL JOURNAL when writing to advertisers.



# H O R M O T O N E

The Dynamogenic Hormone Tonic for

## Asthenic Conditions

Indications: Neurasthenia and all asthenic conditions; premature senility and the debilities of old age; menstrual disorders and climacteric disturbances; chronic cardiac cases with hypotension, circulatory stasis and cold extremities; convalescent and post-febrile weakness.

The Fatigue Syndrome Yields to  
Hormotone as to No Other Agent

DOSE: *One or two tablets three times daily before meals*

In Neurasthenia associated with High Blood Pressure use

**HORMOTONE WITHOUT PITUITARY**

**G. W. CARNRICK CO., 31 Sullivan Street, NEW YORK**

## AIDS IN DIAGNOSIS

Wassermann Test (Blood and Spinal Fluid) . . . . .	\$5.00
Complement Fixation Test (Gonorrhea, Tuberculosis, Etc.) . . . . .	5.00
Abderhalden Test—Pregnancy . . . . .	5.00
Tissue Pathological Examination . . . . .	5.00
Autogenous Vaccines . . . . .	5.00
Smears, Sputa, Etc. . . . .	1.00
Urinalysis . . . . .	1.50
Spirochaete, Examination by Dark Field Illuminator . . . . .	3.00
Agglutination Test for Blood Transfusion . . . . .	5.00

Send for Containers and Instruction Book

Our names and reputations stand back of our work.  
Established 1904

## CHICAGO LABORATORY

PHONE RANDOLPH 3610

25 E. WASHINGTON ST.

CHICAGO, ILL.

Ralph W. Webster, M. D., Ph. D., Chemical Dept.  
Thomas L. Dagg, M. D., Pathological Dept. C. Churchill Croy, M. D., Bacteriological Dept.



Mention ILLINOIS MEDICAL JOURNAL when writing to advertisers



UNTOUCHED BY HAND

AN IDEAL BEVERAGE  
A COMPLETE FOOD.

TRADE MARK

**OVALTINE**

THE FOOD BEVERAGE.

CONCENTRATED  
MALT EXTRACT  
AND EGGS

WITH  
N SOI  
GRAN

VS -

TO B

"From Mother Earth, from farm  
and furrowed field,  
Each brings his share of Nature's  
bounteous yield."

# OVALTINE

is manufactured from wholesome farm products  
*barley malt, milk* and *eggs* exquisitely flavored  
with the purest *cocoa*.

Issued in the form of readily soluble granules,  
easily digested, completely assimilated, palatable,  
and economical.

## The food in convalescence

A Complete  
Food Beverage

For samples and complete analysis, write to  
**THE WANDER COMPANY**, Dept. 4, 23 N. Franklin St.,  
CHICAGO  
Established 1885 by Dr. A. Wander Co., Ltd., Berne, Switzer and Oval-  
tine is used by leading European physicians and dietitians, also in recu-  
perating bases of allied armies.



# CALCREOSE

The therapeutic value of creosote is well known and has long been recognized. Its use has been neglected largely because of the difficulties of administration. Calcreose, a chemical combination of creosote and calcium (contains 50% creosote) overcomes many of the objections.

**Calcreose is of value in the treatment of bronchitis, especially the bronchitis associated with pulmonary tuberculosis, and in gastro-intestinal infections.**

Calcreose has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in "New and Non-official Remedies."

## Formulae and Price List

**Calcreose Powder.** A reddish brown powder, containing 50 per cent creosote in combination with calcium  
Per Pound, \$3.00

**Calcreose Tablets,** coated brown, 4 grs.,  
100, 40c; 500, \$1.60; 1,000, \$3.00

Calcreose is carried in stock by wholesale druggists; also supplied to physicians direct. We ship charges prepaid. Literature and samples free to physicians.

*As high as  
120 grains of  
Calcreose has  
been given  
daily without  
digestive dis-  
turbance.*

**THE MALTBE CHEMICAL CO**  
**PHARMACEUTICAL CHEMISTS**  
**NEWARK NEW JERSEY**

# Chloretone

A broadly serviceable hypnotic and sedative

---

Chloretone induces natural sleep.

It acts as a sedative to the cerebral, gastric and vomiting centers.

It does not depress the heart.

It does not disturb the digestive functions.

It produces no objectionable after-effects.

It does not cause habit-formation.

## INDICATIONS.

Insomnia of pain.

Insomnia of mental strain or worry.

Insomnia of nervous diseases.

Insomnia of old age.

Insomnia of tuberculosis.

Alcoholism, delerium tremens, etc.

Acute mania.

Puerperal mania.

Periodic mania.

Senile dementia.

Agitated melancholia.

Motor excitement of general paresis.

Spasmodic affections, as asthma, epilepsy, chorea, pertussis, tetanus, etc.

Nausea and vomiting of anesthesia.

Seasickness.

The pains of pregnancy.

Vomiting of pregnancy.

Chloretone has been pronounced the most satisfactory hypnotic and sedative available to the medical profession.

CHLORETONE: Ounce vials.

CHLORETONE CAPSULES: 3-grain, bottles of 100 and 500.

CHLORETONE CAPSULES: 5-grain, bottles of 100 and 500.

Dose, 3 to 15 grains.

Home Offices and Laboratories,  
Detroit, Michigan.

**Parke, Davis & Co.**



# FELLOWS' SYRUP

Differs from other preparations of the Hypophosphites. Leading Clinicians in all parts of the world have recognized this important fact. HAVE YOU?

TO INSURE RESULTS,  
**Prescribe the Genuine**

**R** Syr. Hypophos. Comp. FELLOWS'

**REJECT** < Cheap and Inefficient Substitutes  
Preparations "Just as Good"

THE FELLOWS  
MEDICAL MANUFACTURING CO. LTD.  
225 CHRISTOPHER ST.  
NEW YORK

## TUBERCULOSIS - ALBUQUERQUE, NEW MEXICO

Climatic Conditions Unsurpassed  
Altitude 5000 feet  
In the LAND OF SUNSHINE

Experienced Medical Supervision  
Trained Nurses in Constant Attendance  
All Approved Therapeutic Measures Employed

**The Murphey Sanatorium**



A High-Class Institution for the Treatment of Tuberculosis.  
Forty Rooms—Ten with private bath—Thirty with bath between each two rooms.  
Every Room has a Private Sleeping Porch.  
Located in the midst of beautiful Mountain Scenery.

Rates: \$18.50 to  
\$25.00 per week  
**NO EXTRAS**

DESCRIPTIVE BOOKLET AND FULL INFORMATION MAILED ON REQUEST

**THE MURPHEY SANATORIUM,**

W. T. MURPHEY, M. D.,  
MEDICAL DIRECTOR

MRS. HATTIE SOWER,  
SUP'T.

**Albuquerque, New Mexico**

DAVID A. SPEAR, M. D.  
BACTERIOLOGIST



## THE OTTAWA TUBERCULOSIS COLONY

OTTAWA, ILL.

is devoid of the "institutional atmosphere."  
It is designed and conducted to meet the  
requirements of patients who demand



**Privacy and  
Individual Attention**

*Special consideration is given  
to Quality of Service*

Rates \$25.00 to \$35.00 per week

H. V. PETTIT, Supt.

OTTAWA

ILLINOIS



## Chicago Fresh Air Hospital

(FOR TUBERCULOSIS)

*At Rogers Park, Chicago, Illinois*

Patients received in *all* stages of Pulmonary Consumption.

Private Rooms and Board, \$25.00 per week.

Open Porch and two-bed Rooms, with Board, \$15.00.

**Tuberculin Treatment  
Artificial Pneumo-Thorax**

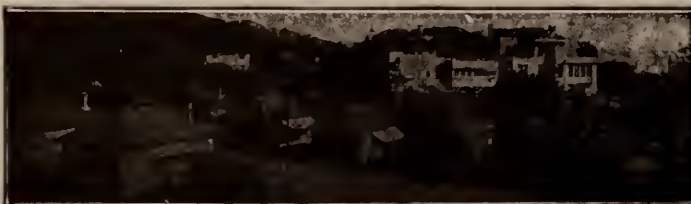
**DR. ETHAN A. GRAY,**

*Medical Superintendent.*

## THE POTTENGER SANATORIUM

MONROVIA, CALIFORNIA

FOR DISEASES OF THE LUNGS AND THROAT



A thoroughly equipped institution for the scientific treatment of tuberculosis. High class accommodations. Ideal all-year-round climate. Surrounded by orange groves and beautiful mountain scenery, 45 minutes from Los Angeles.

F. M. POTTENGER, A.M., M.D. LL.D.,  
Medical Director.

J. E. POTTENGER, A.B., M.D., Assistant  
Medical Director and Chief of Laboratory.

GEORGE H. EVANS, M.D. San Francisco,  
Medical Consultant.

For Particulars, Address THE POTTENGER SANATORIUM, Monrovia, California  
LOS ANGELES OFFICE, 1100-1101 TITLE INSURANCE BUILDING, FIFTH AND SPRING STREETS



## EDWARD SANATORIUM

For the Treatment of Incipient Pulmonary Tuberculosis  
NAPERVILLE, ILLINOIS



Established 1907. Attractive surroundings. Large grounds. Open-air sleeping cottages and Infirmary with all appointments necessary for the comfort of the patients.

Modern hygienic-dietetic methods of treatment. Medical and laboratory facilities. Resident physicians and trained nurses.

Tuberculin Treatment and Artificial Pneumothorax in suitable cases

*For detailed information, rates and rules of admission, apply to*

CHICAGO TUBERCULOSIS INSTITUTE, 8 South Dearborn Street, Room 1212, CHICAGO, ILL.



On Main Line Chicago, Milwaukee & St. Paul Railway  
30 Miles West of Milwaukee

## Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

For Nervous and Mild Mental Diseases

Building New, Most Approved Fireproof Construction

ARTHUR W. ROGERS, M.D., Resident Physician in Charge  
LONG DISTANCE TELEPHONE

Built and equipped to supply the demand of the neurasthenic, borderline and undisturbed mental case for a high class home free from contact with the palpable insane, and devoid of the institutional atmosphere. Forty-one acres of natural park in the heart of the famous Wisconsin Lake Resort Region. Rural environment, yet readily accessible. The new building has been designed to encompass every requirement of modern sanitarium construction, the comfort and welfare of the patient having been provided for in every respect. The bath department is unusually complete and up-to-date. Number of patients limited, assuring the personal attention of the resident physician in charge.

Trains stop at Oconomowoc on request.

## The Norbury Sanatorium

JACKSONVILLE

--

ILLINOIS

Established by Dr. Frank P. Norbury, 1901

Incorporated and Licensed

“Maplewood” — “Maplecrest”

Capacity Forty Beds

PRIVATE RESIDENTIAL HOMES for the treatment of Nervous and Mental Disorders. Especial attention given to the treatment, by approved modern methods, of the Psychoneuroses, Exhaustion states and selected Psychoses and addiction cases.

Dr. FRANK P. NORBURY,  
Medical Director. (Late  
Allenist, State Board of Ad-  
ministration. Formerly  
Supt. Kankakee State Hos-  
pital.)

DR. ALBERT H. DOLLEAR  
Superintendent (Late  
Clinical Asst., State Psycho-  
pathic Institute, Kankakee,  
Formerly Asst. Supt., Water-  
town State Hospital.)

Address all communications, THE NORBURY SANATORIUM, 806 South Daimond Street, JACKSONVILLE, ILLINOIS  
Springfield Office, DR. FRANK P. NORBURY, 407 South Seventh Street, by appointment

# Kenilworth Sanitarium

(Established 1905)

## KENILWORTH, ILLINOIS

(C. & N.-W. Railway. Six miles north of Chicago)



All correspondence should be addressed to Kenilworth Sanitarium, Kenilworth, Illinois

Built and equipped for the treatment of nervous and mental diseases. Approved diagnostic and therapeutic methods. An adequate night nursing service maintained. Sound proof rooms with forced ventilation. Elegant appointments. Bath rooms en suite, steam heating, electric lighting, electric elevator.

### Resident Medical Staff

Ella Blackburn, M. D.,

Sanger Brown, M. D.,

Sherman Brown, M. D.

Chicago Office: 59 East Madison Street

Telephone: Randolph 5794.

Consultation by appointment only



Established 1867

# BELLEVUE SANITARIUM

BATAVIA, ILLINOIS  
near CHICAGO

*For Nervous and Mental Diseases  
of Women Only*

Restful, homelike and accessible. Treatment modern,  
scientific and ethical.

TERMS MODERATE.

WRITE FOR BOOKLET

## Nasal Spraying Outdone

### The V-E-M Applicator—

a hard rubber attachment that screws onto the collapsible tube "shoots" ointment up into the nose, where it stays for *hours*. Sprayed fluids quickly run down and out. This slick little device insures most effective local medication in

**Coryza, Rhinitis  
Catarrh, Hay Fever**

Free with every tube of  
V-E-M Ung. Eucalyptol Compound  
Send 10 cents for a tube of V-E-M and  
the Applicator (regular price 50 cents)



Schoonmaker Laboratories, Inc. 70 East 42nd St.  
New York

Buy from our advertisers.  
If they don't give as good  
or better value than others,  
kick to us—

*We'll do the rest*



BUILDING ABSOLUTELY FIRE-PROOF

# Waukesha Springs Sanitarium

FOR THE CARE AND TREATMENT OF  
**NERVOUS DISEASES**

BYRON M. CAPLES, M.D., Superintendent

Waukesha

::

Wisconsin



# NEURONHURST

Dr. W. B. Fletcher's Sanatorium



**For Treatment of Mental and Nervous Diseases, Including Legally Committed and Voluntary Cases**  
Well equipped with all facilities for the care and treatment of all forms of mental and nervous diseases, inebriety, drug addiction and those requiring recuperation and rest. Gynecological department is in charge of skilled women physicians. All approved forms of Hydrotherapy, Balneotherapy, Massage, Swedish Movements, etc. All forms of Electrical Treatments. Phototherapy, High Frequency and X-Ray work. A strictly ethical institution. Correspondence with physicians invited. For particulars and terms, address:  
**DR. MARY A. SPINK, Superintendent. Long Distance Telephones 1140 E. Market St., INDIANAPOLIS**

## DR. SIDNEY D. WILGUS

Retiring Superintendent of Kankakee State Hospital, also former Superintendent of Elgin State Hospital.

### Begs to Announce

that he has purchased a Sanitarium at Rockford, Ill. (The Ransom)

and is prepared to give personal care and attention to mental and nervous cases and drug addictions. Modern features having been added, the equipment is qualified to give up-to-date treatment. Also tennis, croquet, boating, and other out-door exercises are prescribed. A nine-hole golf course is near by. Correspondence solicited, or, to save time, telephone: Long Distance, Rockford 3767, and reverse the charges. On request patients are met at any train with an automobile.

Mail address, **DR. SIDNEY D. WILGUS, Box 304, Rockford, Ill.**

Chicago Office. Thursday Mornings until 12 at Suite 1603, 25 E. Washington St.

And by appointment



ENTRANCE

WEST HOUSE

OFFICE AND BATH HOUSE

PSYCHOPATHIC HOSPITAL

GYMNASIUM

Established  
in 1884

## THE MILWAUKEE SANITARIUM

For Mental and Nervous Diseases

Wauwatosa,  
Wis.

Located at Wauwatosa (a suburb of Milwaukee) on C. M. & St. P. Ry., 2 1/4 hours from Chicago, 15 minutes from Milwaukee, 5 minutes from all cars. Two lines street cars. Complete facilities and equipment as heretofore announced. Psychopathic Hospital: Continuous baths, fireproof building, separate grounds. West House: Rooms en suite with private baths. Gymnasium and Recreation Building: Physical culture, "Zander" machines, shower baths. Modern Bath House: Hydrotherapy, Electrotherapy, Mechanotherapy. 30 acres beautiful Mill forest and lawn. Five houses. Individual treatment. Descriptive booklet will be sent upon application.

**RICHARD DEWEY, A. M., M. D.**

**EUGENE CHANEY, A. M., M. D.**

**WILLIAM T. KRADWELL, M. D.**

CHICAGO OFFICE: Marshall Field Annex, 25 E. Washington Street, Room 1823, Wednesdays 1 to 3 P. M., (except in July and August) Tel. Centra 1163  
MILWAUKEE OFFICE: Goldsmith Building, Room 504. Consultation by appointment. Tel. Main 81.  
TELEPHONE SANITARIUM OFFICE: Milwaukee-Wauwatosa 16.

Mention ILLINOIS MEDICAL JOURNAL when writing to advertisers



## The Cincinnati Sanitarium For Mental and Nervous Diseases

Incorporated 1873

A strictly modern hospital fully equipped for the scientific treatment of nervous and mental affections. Situation retired and accessible. For details write for descriptive pamphlet.

F. W. Langdon, M.D., Medical Director

B. A. Williams, M.D., Resident Physician

Emerson A. North, M.D., Resident Physician

H. P. COLLINS, Business Manager,

Box No. 4,

College Hill,

Cincinnati, Ohio



ABSOLUTELY FIREPROOF BUILDING

LESS THAN THREE HOURS FROM CHICAGO

## Mud Baths

For the treatment of RHEUMATISM, Nervousness, Kidney, Liver and Skin Diseases, and all ailments requiring elimination and relaxation. Location beautiful; climate healthful; 80 acres of private grounds.

DR. E. P. ALLEN, Medical Director

*Correspondence with physicians solicited*

For rates, literature and reservations, address

**Waukesha Moor (Mud) Bath Co.**

WAUKESHA, WISCONSIN

## "BEVERLY FARM"

Home and School for Nervous and Backward Children

5 buildings, schools and gymnasium, 176 acres of land, 40 acres of timber, containing beautiful Camp Belle log cabin for recreation; separate buildings for boys and also children under 10 years of age. Thirty-six years experience. Consultations at home if desired. Publicity avoided. Address all communications to

**W. H. C. SMITH, M. D., Superintendent**

GODFREY, MADISON CO., ILLINOIS

"Beverly Farm" was awarded Grand Prize by Committee of Awards of the Louisiana Purchase Exposition

## The Peoria Mud Baths

We insist that your patients can eliminate as freely and as effectually in Illinois as in any other State in the Union.

Strict ethical relations. Thoroughly equipped. Have had thousands of patients.

DR. T. W. GILLESPIE, Medical Supt.

**SULPHUR SPRINGS SANITARIUM**

215-217 N. Adams St. Peoria, Illinois





# DR. WEIRICK'S SANITARIUM

FORMERLY DR. BROUGHTON'S SANITARIUM  
ESTABLISHED IN 1901

**For Opium, Morphine  
Cocaine and Other Drug  
Addictions, Including  
Alcohol and Special  
Nervous Cases**

Methods easy, regular, humane.  
Good heat, light, water, help, board,  
etc. Number limited to 44. A well  
kept home. Nervous-Mental De-  
partment in charge of Dr. W. L.  
Ransom. Address

**DR. G. A. WEIRICK**  
SUPERINTENDENT

**2007 South Main Street**

Phone 536  
Rockford - - - Illinois

**PETTEY & WALLACE**  
958 S. Fifth Street  
MEMPHIS, TENN. **SANITARIUM**



FOR THE TREATMENT  
OF

**Drug Addiction, Alcoholism,  
Mental and Nervous Diseases**

A quiet, home-like, private, high-  
class institution. Licensed. Strictly  
ethical. Complete equipment. Best  
accommodations.

Resident physician and trained  
nurses.

Drug patients treated by Dr.  
Petty's original method.

Detached building for mental  
patients.

# The Peoria Sanatorium

A private Sanatorium for the treatment of Nervous and Mental Diseases,  
by modern methods. Flowing Sulphur Spring. Licensed by the State.

**DRUG AND LIQUOR HABITS TREATED**

WRITE FOR BOOKLET

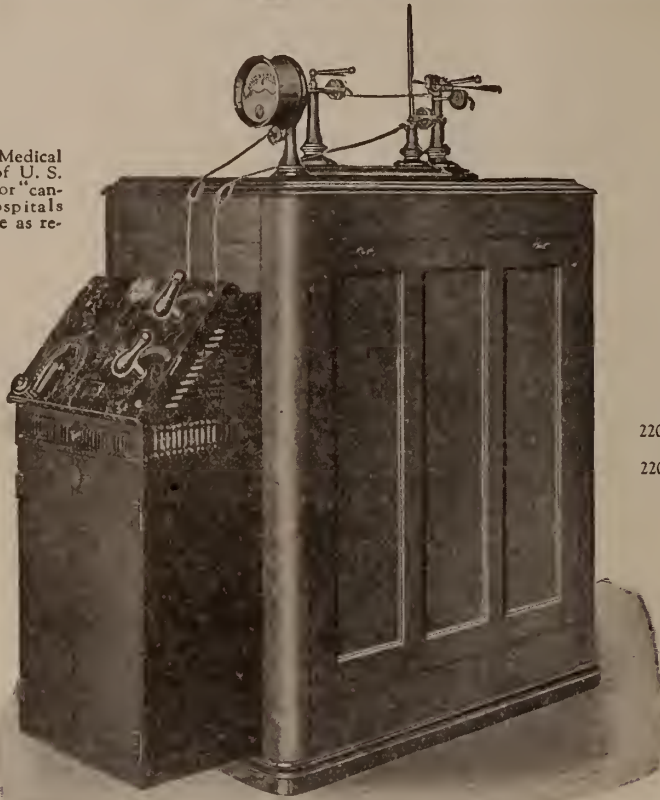
Director, DR. GEO. W. MICHELL

PHONE MAIN 225.

Address, 106 N. Glen Oak, PEORIA, ILL.



Accepted by Medical  
Department of U. S.  
Government for "can-  
tonment" hospitals  
and elsewhere as re-  
quired.



220 volts, A. C.  
\$1025.00  
220 volts, D. C.  
\$1300.00  
(F. O. B.  
Chicago)

## Another "Victor" Accomplishment —the Victor "New Universal" Roentgen Apparatus

Point for point and dollar for dollar, it epitomizes "next to the last word" in the Victor ideal of a modern roentgen generator

### SPECIFICATIONS

DESIGN—Closed core and single disk.

CAPACITY—10 kilowatt.

SPARK LENGTH—10 inches.

CONTROL—Auto transformer or resistance—  
singly or in combination, as preferred.

SWITCHBOARD—Attached to either end of  
cabinet or separately mounted.

Complete details are given in Victor Bulletin 207, which  
will be gladly sent on request—and without obligation

## VICTOR ELECTRIC CORPORATION

CHICAGO  
236 S. Robey St.

CAMBRIDGE, MASS.  
66 Broadway

NEW YORK  
131 E. 23rd St.

### *Territorial Sales Distributors:*

CHICAGO: Victor Electric Corporation, 236 S. Robey St.

CHICAGO: John McIntosh Co., 30 E. Randolph St.

ST. LOUIS, MO.: John McIntosh Co., 4485 Olive St.



## "I Use Ergotole in Dysmenorrhea"

*in one Adrm doses in hot water*

every hour for three doses—then at four-hour intervals if necessary (which seldom happens), and my cases get through the period with comparative comfort and with but, little pain."



*That's the gist  
of a recently  
received report*

### Sharp & Dohme

Purveyors to  
Particular Prescribers  
Since 1860

Are YOU using "Every Doctor's Ergot" in that way?  
If not, there's a sample waiting for you in Baltimore.

## The Standard Laboratories

### MANUFACTURING PHARMACISTS

**Q**UALITY, SERVICE and PRICE of drugs are necessary to success in the practice of medicine. Our products are manufactured from the purest drugs and chemicals obtainable, under the most skillful supervision, and the service is prompt. Our prices are the lowest consistent with quality.

**YOUR ORDERS SOLICITED**

**2626-2628 Shields Avenue - CHICAGO, ILL.**

Phone Calumet 6090

# RADIUM THERAPY

## UTERINE HEMORRHAGES

Malignant and Benign Growths  
TREATED WITH RADIUM

*Perfected Mechanical Devices for the Scientific Application to Bladder,  
Rectum, Oesophagus, Throat and Post-nasal Space.*

**REFERRED CASES WILL REMAIN UNDER THE GENERAL SUPERVISION OF  
THE ATTENDING PHYSICIAN**

C. W. HANFORD, M. D.

Room 1010  
Columbus Memorial Building  
**31 NO. STATE STREET**

Phone MAJESTIC **7330**  
HOURS: 9 A. M. to 12 M.  
Afternoons by Appointment

## PRESCRIPTION SERVICE THAT SATISFIES

The service that firmly holds customers and constantly attracts new ones,  
is SERVICE that SATISFIES.

The facilities of

### THE WHITE-HAINES OPTICAL CO.

are equal to the severest test.

ACCURACY is our first consideration.

Prompt Deliveries consistent with accuracy is our second consideration.

Our ability to handle a large volume of work promptly is worthy of your consideration.

We are Headquarters for Punktals, Kryptoks, Ultex one-piece, Naktic and Korectal (Trade Mark Reg.) lenses.

*Try our "SERVICE THAT SATISFIES"*

### THE WHITE-HAINES OPTICAL CO.

COLUMBUS, O. INDIANAPOLIS, IND. SPRINGFIELD, ILL.



Hamilton County

E. S. Hall, Pres.....McLeansboro  
P. M. Nation, Secy.....McLeansboro  
Hancock County  
Blair Kelley, Pres.....Ferris  
S. M. Parr, Secy.....Carthage  
Hardin County  
W. J. J. Paris, Pres.....Rosiclare  
F. A. Jones, Secy.....Rosiclare  
Henderson County  
C. E. Kaufman, Pres.....Oquawka  
J. P. Riggs, Secy-Treas.....Media  
Henry County  
H. N. Heflin, Pres.....Kewanee  
P. J. McDermott, Secy.....Kewanee  
Iroquois-Ford District  
O. O. Hall, Pres.....Milford  
W. L. Cottingham, Secy.....Paxton  
Jackson County  
W. A. Brandon, Pres.....Carbondale  
H. G. Horstman, Secy.....Murphysboro  
Jasper County  
John Hamilton, Pres.....Bogota  
James P. Prestley, Secy-Treas.....Newton  
Jefferson County  
E. E. Edmondson, Pres.....Mt. Vernon  
Andy Hall, Secy.....Mt. Vernon  
Jersey County  
H. R. Bohannon, Pres.....Jerseyville  
H. F. Threkeld, Secy.....Jerseyville  
Jo Daviess County  
U. S. G. Keller, Pres.....Warren  
T. J. Stafford, Secy.....Stockton  
Johnson County  
C. D. Nobles, Pres.....Buncombe  
H. W. Walker, Secy.....Grantsburg  
Kane County  
A. E. Diller, Pres.....Aurora  
L. J. Hughes, Secy-Treas.....Elgin  
Kankakee County  
C. W. Geiger, Pres.....Kankakee  
E. S. Hamilton, Secy-Treas.....Kankakee  
Kendall County  
R. A. Schaefer, Pres.....Plano  
Robt. McCelland, Secy.....Yorkville

Knox County

A. C. Keener, Pres.....Altoona  
G. S. Bower, Secy.....Galesburg  
Lake County  
J. M. Palmer, Pres.....Grays Lake  
C. S. Ambrose, Secy-Treas.....Waukegan  
La Salle County  
Geo. K. Wilson, Pres.....Streator  
E. E. Perisho, Secy.....Streator  
Lawrence County  
H. V. Davis, Pres.....Lawrenceville  
F. F. Petty, Secy.....Lawrenceville  
Lee County  
E. B. Owens, Pres.....Dixon  
C. G. Poole, Secy.....Compton  
Livingston County  
E. G. Beatty, Pres.....Pontiac  
John Ross, Secy.....Pontiac  
Logan County  
W. W. Coleman, Pres.....Lincoln  
H. S. Oyler, Secy.....Lincoln  
McDonough County  
E. R. Miner, Pres.....Macomb  
Geo. S. Duntley, Secy.....Bushnell  
McHenry County  
N. L. Seelye, Pres.....Harvard  
Hyde West, Secy.....Woodstock  
McLean County  
Frank C. Fisher, Pres.....Bloomington  
Bernice Curry, Secy.....Bloomington  
Macon County  
F. J. Mittan, Pres.....Decatur  
C. E. Hildreth, Secy.....Decatur  
Macoupin County  
G. E. Hill, Pres.....Girard  
T. D. Doan, Secy.....Scottville  
Madison County  
J. Barnard Hastings.....Alton  
E. W. Fliegenbaum, Secy.....Edwardsville  
(Continued on page 32)

# Chicago Eye, Ear, Nose and Throat College

A Post-Graduate School for Prac-  
titioners of Medicine

235 W. Washington Street  
Chicago, Ill.

Catalogue on Application

# Chicago Maternity Hospital and Training School for Nurses

ACCOMMODATES 25 PATIENTS  
RATES: \$10.00 to \$25.00 PER WEEK

Well infants cared for in nursery for \$5.00 per week.  
Training School for Obstetrical and Infants' nurses.

Address

EFFA V. DAVIS, M.D., 2314 N. Clark St., Chicago

# Home Training In Nursing



We offer a thorough extension course to beginners and also to practical nurses wishing to perfect themselves in the theory and science of nursing.

There is in every community a demand for competent nurses — women physically qualified and possessing natural ability, who for various reasons cannot leave home to get their training. Through the aid of the very thorough system of instruction used by this school for a period of sixteen years, we have trained hundreds of women who have "made good" as practical nurses. In fact our graduates adapt themselves to the inconveniences of private nursing more readily than the hospital-trained nurse. They are loyal to the home doctor, whose co-operation has made their success possible.

Reputable physicians are invited to investigate our methods and co-operate with us by sending the names of earnest women who in their estimation would make desirable applicants. Tuition fees very reasonable—small payment plan. Write for the Sixteenth Annual Announcement. Address

Karen Esmann, Registrar  
**CHICAGO SCHOOL OF NURSING**  
116 S. Michigan Blvd., Chicago, Ill.

# Coöperative Malpractice Insurance

Limited to Members of Recognized Medical Societies

## Group Form Plan—

originated and issued only by Ætna Life Insurance Company to provide real protection and service on a common sense basis.

## This Means Protection—

against loss arising from claims based upon any injury to a patient occurring in the lawful practice of the Assured's profession. No limitation on reason for making claim.

## Avoids Technicalities—

furnishes complete defense; also indemnity, \$5,000 for one injury; \$15,000 total all judgments account of each year's acts.

**ABSOLUTE SECURITY**

## Ætna Attorneys—

(Specialists in personal injury claims) always available to Assured both before and after claim is made, without extra charge.

## Compromises—

the Ætna prefers to defend suit to the highest court. Cannot settle without consent of Assured and approval of three members of the Group.

## Appeal Bonds Furnished—

If necessary in defending suit (up to limit specified in policy) without cost or deposit of collateral—a radical departure of real value to the Assured.

**SURPLUS TO POLICYHOLDERS, \$18,985,333.30**

# ÆTNA-IZE

Write or phone Ætna Life Insurance Company, Local Agent, or  
George Tramel, Manager, Insurance Exchange Building, Chicago, Illinois

## Preparedness is the Slogan of the Day. We are Prepared

to furnish promptly to the specialist in every branch of surgery the correct instrument and apparatus which are of such great assistance in the performance of the Surgeon's work



**V. MUELLER & CO.,** Makers of Surgeons' instruments, Hospital and Office Equipment, 1771-1781 Ogden Ave., CHICAGO



# INDEX TO ADVERTISERS

Abbott Laboratories.....	7
Aetna Life Insurance Co.....	30
Bayer Company.....	8
Bellevue Sanitarium.....	22
Beverly Farm School.....	24
Carrick, G. W., Co.....	15
Chicago College of Medicine and Surgery.....	29
Chicago Eye, Nose & Throat College.....	29
Chicago Fresh Air Hospital.....	20
Chicago Laboratory.....	15
Chicago Maternity Hospital.....	29
Chicago Pasteur Institute.....	9
Chicago School of Nursing.....	29
Cincinnati Sanitarium.....	24
College of Medicine, Univ. of Ill.....	29
Columbus Medical Laboratory.....	12
Crittenton, Chas. N., Co.....	21
Edward Sanatorium.....	21
Fellows Medical Mfg. Co.....	19
Fletcher's Sanatorium.....	23
Gradwohl Biological Laboratories.....	12
Hanford, Dr. C. W.....	28
Horlick's Malted Milk Co.....	2
Kenilworth Sanitarium.....	22
Laboratory of Pathology and Bacteriology.....	2
Lambert Pharmaceutical Company.....	13
Lederle Antitoxin Laboratory.....	35
Leuzarder & Co.....	26
Lindrooth, E. F.....	14
Maltbie Chemical Co.....	17
McIntosh, John, Co.....	11
Medical Protective Co.....	11
Mead, Johnson & Co.....	4
Mellier Drug Co.....	9
Mellin's Food Co.....	6
Milwaukee Sanitarium.....	23
Mosby Co., C. V.....	36

Mueller & Co., V.....	30
Mulford, H. K., Co.....	19
Murphey Sanatorium.....	19
Norbury Sanitarium.....	21
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Parke, Davis & Co.....	18
Pasteur Institute of St. Louis.....	9
Pennoyer Sanitarium.....	6
Peoria Mud Baths.....	24
Peoria Sanatorium.....	25
Petty & Wallace's Sanitarium.....	25
Phillips Co., Chas. H.....	32
Physicians' Radium Association.....	18
Pine Sanatorium.....	34
Pitman-Moore Co.....	4
Pottenger Sanatorium.....	20
Purdue, Frederick, Co.....	8
Pure Gluten Food Co.....	5
Quaker Oats Co.....	5, 33
Radium Institute.....	36
Ransom Sanitarium.....	23
Saunders Co., W. B.....	front cover
Schoonmaker Laboratories.....	22
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Sherman, G. H., M. D.....	5
Standard Laboratories.....	27
Standard Oil Co.....	3
Storm, Katherine L., M. D.....	11
Swan-Myers Co.....	9
Tilden Co., The.....	6
Victor Electric Co.....	26
Wander, Dr. A.....	16
Waukesha Moor (Mud) Bath Co.....	24
Waukesha Springs Sanitarium.....	22
Waukesha Pure Food Co.....	22
Weirick's Sanitarium.....	25
White-Haines Optical Co.....	28

## BUYER'S INDEX

### ABDOMINAL SUPPORTERS

Storm, Katherine L., M. D.....	11
--------------------------------	----

### AUTOMOBILES, ETC.

Standard Oil Co.....	3
----------------------	---

### FOOD

Horlick's Malted Milk Co.....	2
Mead, Johnson & Co.....	4
Mellin's Food Co.....	6
Pure Gluten Food Co.....	5
Quaker Oats.....	5, 33
Wander's Ovaltine.....	16
Waukesha Pure Food Co.....	30

### HOSPITAL

Chicago Fresh Air Hospital.....	20
Chicago Maternity Hospital.....	29

### INVESTMENTS AND INSURANCE

Aetna Life Insurance Co.....	30
Medical Protective Co.....	11

### LABORATORY

Abbott Laboratories.....	7
Chicago Laboratory.....	15
Columbus Medical Laboratory.....	12
Gradwohl Biological Laboratories.....	12
Laboratory of Pathology and Bacteriology.....	2
Schoonmaker Laboratories.....	22
Standard Laboratories.....	27
Swan-Myers Co.....	16

### MEDICAL BOOK PUBLISHERS

Saunders Co., W. B.....	front cover
Mosby Co., C. V.....	36

### MEDICAL SCHOOLS

Chicago College of Medicine and Surgery.....	29
Chicago Eye, Ear, Nose and Throat College.....	29
College of Medicine, Univ. of Ill.....	29

### MUD BATHS

Peoria Mud Baths.....	24
Waukesha Moor (Mud) Bath Co.....	24

### NURSES

Chicago School of Nursing.....	29
--------------------------------	----

### PHARMACEUTICALS

Abbott Laboratories.....	7
Bayer Company.....	8
Carrick, G. W., Co.....	15
Crittenton, Chas. N., Co.....	21
Fellows Medical Mfg. Co.....	19
Hanford, Dr. C. W.....	28
Kenilworth Sanitarium.....	22
Lederle Antitoxin Laboratory.....	35
Lambert Pharmacal Company.....	13
Maltbie Chemical Co.....	17
Mead, Johnson & Co.....	4
Mellier Drug Co.....	9
Mulford, H. K., Co.....	10
Parke, Davis & Co.....	18
Phillips Co., Chas. H.....	32
Pitman-Moore Co.....	4
Purdue, Frederick, Co.....	8
Sherman's Bacterins.....	5
Searle & Co., G. D.....	6
Sharp & Dohme.....	27
Swan-Myers Co.....	9
Tilden Co., The.....	6

### SANATORIA & SANITARIA

Bellevue Sanitarium.....	22
Cincinnati Sanitarium.....	24
Edward Sanatorium.....	21
Fletcher's Sanatorium.....	23
Kenilworth Sanitarium.....	22
Norbury Sanitarium.....	21
Milwaukee Sanitarium.....	23
Murphey Sanatorium.....	19
Oconomowoc Health Resort.....	21
Ottawa Tuberculosis Colony.....	20
Pennoyer Sanitarium.....	6
Peoria Sanitarium.....	25
Petty & Wallace's Sanitarium.....	25
Pine Sanatorium.....	34
Pottenger Sanatorium.....	20
Radium Institute.....	36
Ransom Sanitarium.....	23
Waukesha Springs Sanitarium.....	22
Weirick's Sanitarium.....	25

### SURGICAL INSTRUMENTS

McIntosh, John, Co.....	11
Mueller & Co., V.....	30
Victor Electric Co.....	26

IN PLACE OF OTHER ALKALIES USE

# Phillips' Milk of Magnesia

"THE PERFECT ANTACID"

For Correcting Hyperacid Conditions—Local or Systemic. Vehicle for Salicylates, Iodides, Balsams, Etc.

Of Advantage in Neutralizing the Acid of Cows' Milk for Infant and Invalid feeding.

## Phillips' Phospho-Muriate of Quinine

Compound

NON-ALCOHOLIC TONIC AND RECONSTRUCTIVE

With Marked Beneficial Action Upon the Nervous System. To be relied Upon Where a Deficiency of the Phosphates is Evident.

THE CHAS. H. PHILLIPS CHEMICAL CO.

NEW YORK

LONDON

Marion County  
W. W. Murfin, Pres.....Patoka  
J. M. Gambill, Secy.....Centralia  
Marshall-Putnam County  
R. R. Eddington, Pres.....Lacon  
R. L. Eddington, Secy.....Lacon  
Mason County  
H. O. Rogier, Pres.....Mason City  
W. R. Grant, Secy.....Easton  
Massac County  
J. A. Orr, Pres.....Metropolis  
J. A. Helm, Secy.....Metropolis  
Menard County  
H. E. Wilkins, Pres.....Petersburg  
H. P. Moulton, Secy.....Petersburg  
Mercer County  
C. M. Murrell, Pres.....Mathersville  
A. N. Mackey, Secy.....Aledo

Monroe County  
S. Kohlenbach, Pres.....Columbia  
L. Adelsberger, Secy.....Waterloo  
Montgomery County  
C. H. Lockhart, Pres.....Witt  
G. W. Cox, Secy.....Litchfield  
Morgan County  
G. R. Bradley, Pres.....Jacksonville  
W. L. Frank, Secy.....Jacksonville  
Moultrie County  
C. W. Taylor, Pres.....Bethany  
O. M. Williamson, Secy.....Sullivan  
Ogle County  
A. H. Beebe, Pres.....Stillman Valley  
J. T. Kretsinger, Secy.....Leaf River  
Peoria City Medical Society  
O. B. Will, Pres.....Peoria  
Hugh Cooper, Secy.-Treas.....Peoria  
(Continued on page 33)

## CONTENTS—Continued

### EDITORIAL

American Red Cross .....	421
Medical Pioneers of Kentucky.....	422
Resolutions of Clinical Congress.....	422
Firms Licensed to Make Drugs Patented in Germany..	423
Military Training at Age of Nineteen.....	422
Baby's Milk and War Prices.....	424
Tuberculosis, American Review of.....	424

### CORRESPONDENCE

Medical Reserve Corps.....	425
----------------------------	-----

### PUBLIC HEALTH

Venereal Disease Rules.....	425
Antitoxin Distribution, Rules.....	426
Poliomyelitis, State Clinics and After-Care.....	427
State Diagnostic Laboratories .....	427
Tuberculosis—Down-State Clinical Conference.....	427
Communicable Diseases in Illinois.....	428

### SOCIETY PROCEEDINGS

Alexander County .....	428
Cook County:	
Chicago Medical Society .....	428
Chicago Laryngological and Otological Society.....	429
Chicago Ophthalmological Society .....	430
Greene County .....	432
Henderson County .....	433
Montgomery County .....	433
Tri-State District Medical Society .....	433
Personals .....	437
News Items .....	438
Marriages .....	439
Deaths .....	439
Book Notices .....	440



Perry County		
J. S. Templeton, Pres.....	Pickneyville	
J. D. Byrne, Secy.....	Du Quoin	
Platt County		
J. G. Lamb, Pres.....	Cerro Gordo	
St. Clair Vance, Secy.....	Bement	
Pike County		
J. R. Pollock, Pres.....	Nebo	
W. E. Shastid, Secy.-Treas.....	Pittsfield	
Pope County		
J. A. Fisher, Pres.....	Brownsfield	
L. S. Barger, Secy.....	Golconda	
Pulaski County		
L. F. Robinson, Pres.....	Ullin	
W. R. Wesenberg, Secy.....	Mound City	
Randolph County		
A. E. Fritz, Pres.....	Chester	
John P. Grimes, Secy.-Treas.....	Menard	
Richland County		
A. T. Telford, Pres.....	Olney	
E. H. Horner, Secy.....	Olney	
Rock Island County		
H. A. Beam.....	Moline	
H. J. Love, Secy.....	East Moline	
St. Clair County		
J. H. Fulgham, Pres.....	East St. Louis	
A. E. Hansing, Secy.....	Belleville	
Saline County		
M. D. Empson, Pres.....	Galatia	
W. J. Blackard, Secy.....	Harrisburg	
Sangamon County		
Elmer E. Hagler, Pres.....	Springfield	
Henry A. Aschauer, Secy.....	Springfield	
Schuyler County		
A. W. Ball, Pres.....	Rushville	
J. S. Steiner, Secy.....	Rushville	
Scott County		
J. W. Eckman, Pres.....	Winchester	
H. H. Fletcher, Secy.....	Winchester	
Shelby County		
F. A. Martin, Pres.....	Tower Hill	
Frank P. Auld, Secy.....	Shelbyville	
Stark County		
James R. Holgate, Pres.....	Wyoming	
Clyde Berfield, Secy.....	Toulon	
Stephenson County		
N. C. Phillips, Pres.....	Freeport	
D. G. Smith, Secy.....	Freeport	
Tazewell County		
H. L. Yoder.....	Morton	
F. C. Gale, Secy.....	Pekin	
Union County		
S. G. Martin, Pres.....	Anna	
E. V. Hale, Secy.....	Anna	
Vermilion County		
J. B. Morton, Pres.....	Ridge Farm	
Solomon Jones, Secy.....	Danville	
Wabash County		
P. G. Manley, Pres.....	Mt. Carmel	
A. A. Aukenbrandt, Secy.....	Mt. Carmel	
Warren County		
Philo B. Conant, Pres.....	Roseville	
H. M. Camp, Secy.....	Monmouth	
Washington County		
R. Jack, Pres.....	Okawville	
H. Schmidt, Secy.....	Addieville	
Wayne County		
T. J. Hilliard, Pres.....	Fairfield	
Ostella F. Blakely, Secy.....	Fairfield	
White County		
C. B. Staley, Pres.....	Enfield	
John Niess, Secy.....	Carmi	
Whiteside County		
W. H. Durkee, Pres.....	Fulton	
H. N. Schmaling, Secy.....	Fulton	
Will County		
Marion K. Bowles, Pres.....	Joliet	
L. J. Lennon, Secy.....	Joliet	
Williamson County		
J. G. Parmley, Pres.....	Marion	
H. A. Felts, Secy.....	Marion	
Winnebago County		
Wm. E. Park, Pres.....	Rockford	
C. M. Ranseen, Secy.-Treas.....	Rockford	
Woodford County		
W. D. Madison, Pres.....	Roanoke	
H. A. Millard, Secy.....	Minonk	



## Dextrinized Grain Foods Steam-Exploded

Grains are dextrinized by 400 degrees of heat. Puffed Wheat and Puffed Rice get 550 degrees for an hour.

Sealed in huge guns, this fearful heat creates steam in every food cell. When the guns are shot that steam explodes

So these are whole-grain foods with every food cell blasted. This makes digestion easy and complete.

The Puffed Grains are thin, flaky bubbles, eight times normal size. The heat gives an almond flavor. So the foods taste like confections.

The process was invented by Prof. A. P. Anderson, formerly of Columbia University. The result is considered the best-cooked grain foods in existence.

A test, we believe, will reveal a wide service for these hygienic dainties.

### The Quaker Oats Company

Chicago

(1750)

**Puffed  
Wheat**

**Puffed  
Rice**

**And Corn Puffs  
All Steam-Exploded**

**Tested**  
professionally—  
**Approved professionally.**

**Exceptionally**  
**Palatable,**  
**Digestible, Dependable.**

Physicians have been able to prescribe to advantage

## Hydroleine

in cases in which cod-liver oil is indicated. Hydroleine is pure Norwegian cod-liver oil emulsified in a manner which makes it extremely utilizable. It is without medicinal admixture. Sold by druggists.

**THE CHARLES N. CRITTENTON CO.**  
115 Fulton Street, New York

Sample will be sent to physicians on request.

### WANTED, FOR SALE, AND RENT DEPARTMENT

Advertisements under this heading cost one dollar for four lines or less, and 25 cents for each additional line, each insertion. Payable in advance. Line holds eight ordinary words.

**DRUG AND LIQUOR HABITS CURED.** No suffering or danger. New treatment without delirium. Absolutely satisfactory results. Modern Sanitarium, established eighteen years. Close personal attention. **RALPH SANITARIUM, 529 Highland Ave., Kansas City, Mo.**

**FOR SALE**—At one-half present prices, complete line of surgical instruments, embracing gynecological, urethral, nose and throat and general operating. All up-to-date and in good condition. Also microtome and excellent microscope. Address all inquiries to Mrs. Stephen C. Glidden, 422 N. Vermilion St., Danville, Ill.

**EXPERIENCED** graduate nurse desires case in a nice family. Graduate Nurses' Dormitory, 546 Garfield Ave., Chicago. Phones, Lincoln 2155, Diversey 2990.

#### FOR SALE

**Office Equipment for Eye, Ear, Nose and Throat Specialist**

This equipment consists of modern office furniture and apparatus, complete sets of eye, ear, mastoid, nose and throat instruments of the newer types, all in perfect condition.

This is an exceptional opportunity for doctor starting in this specialty, or one who is changing his location.

If interested, write for further information and complete inventory of equipment to Mrs. B. S. Gailey, 340 W. State St., Jacksonville, Ill.

## Drug and Alcoholic Addictions

### Treated Exclusively

*Resident Physician*  
**JAMES H. APPLEMAN, M. D.**

Modern institutional treatment administered under home-like conditions. Ethically conducted. Treatment based on latest scientific physical and laboratory findings. A fixed charge based on a complete examination is made to cover entire course of treatment, including examinations, nursing and medical attendance. Privacy assured. Descriptive and illustrated booklet covering both subjects sent free on request.

## The Pine Sanitarium

*Established 1900*

**1919 Prairie Ave., Chicago, Ill.**

Local and Long Distance Telephone  
Calumet 4543











*The New York Academy of Medicine*

THIS BOOK MUST NOT BE RETAINED FOR  
LONGER THAN ONE WEEK AFTER THE LAST  
DATE ON THE SLIP UNLESS PERMISSION FOR ITS  
RENEWAL BE OBTAINED FROM THE LIBRARY.

11. 33. 4

DEC 18 '34





